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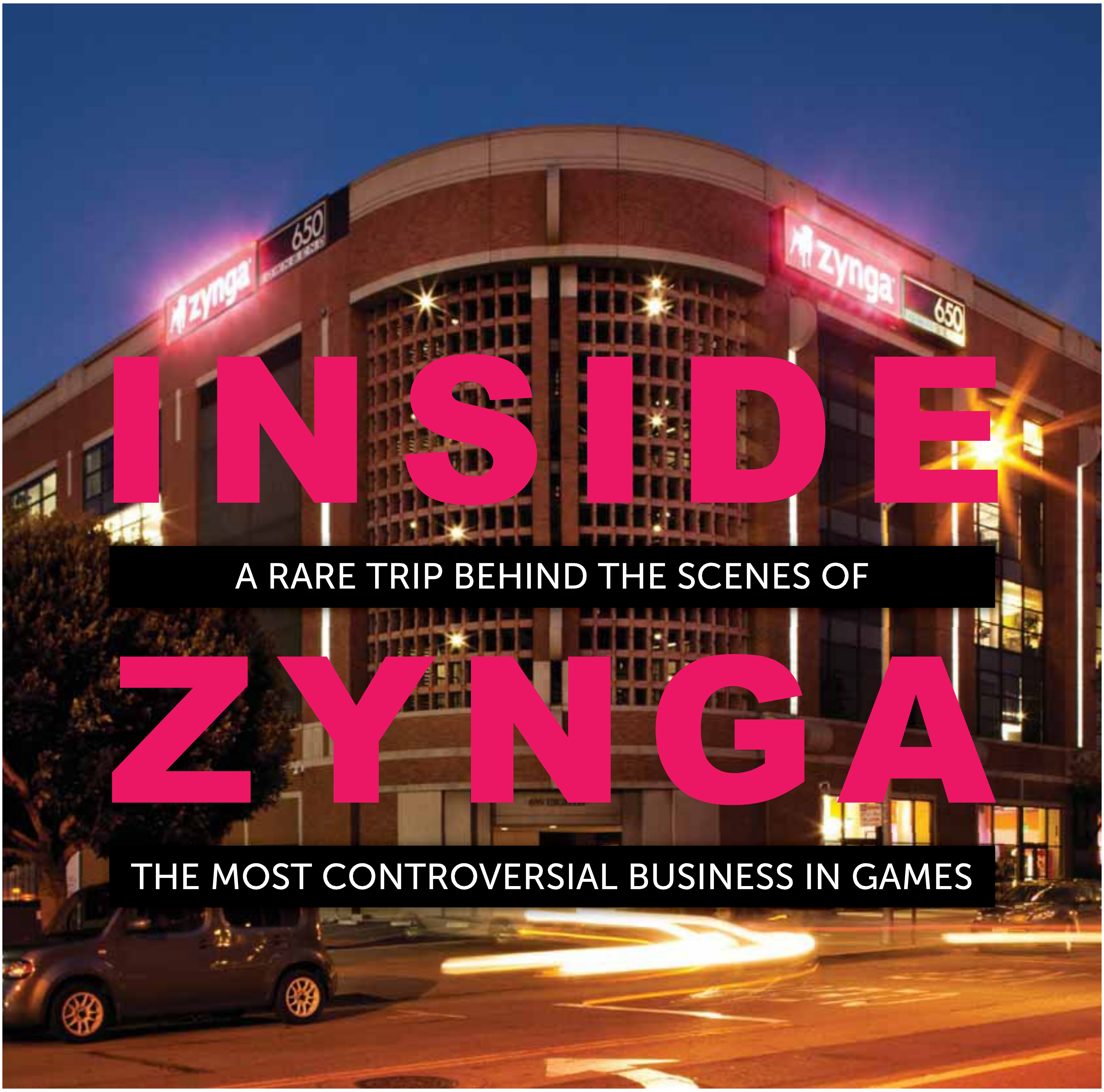

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ALPHA

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RedLynx Evolved

The boss of the Trials Evolution studio talks joining Ubisoft, and giving away tools to the player, p6

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Taking triple-A to mobile platforms p13

EDITORIAL

THE INSIDE STORY

In case you somehow missed the cover on your way to this column, this month *Develop* takes you behind the scenes at social giant Zynga, and asks some of its top staff about the company's methods, and other developers' willingness to criticise it.

The feature offers a fascinating insight into why Zynga is one of the most successful, controversial and closely watched tech companies on Earth.

The *Develop* team has also gathered some of games audio's finest minds to offer unique perspectives on a range of sound-related issues, from using a VO session for simultaneous capture of facial animation data to managing voice production for large scale MMOs and RPGs. Sound libraries also go under the microscope, as do the merits of generative audio. Our Audio Special starts on page 23

Elsewhere in this issue there's an encouraging tale of a temping-tester turned Lionhead game creator who is now bringing *Fable Heroes* to the masses in the wake of Peter Molyneux's departure, and advice direct from LucasArts production supervisor Jason Smith on getting through a job interview.

We've also taken a detailed look and the future of QA and testing as it adapts to the likes of mobile and social gaming, and taken a trip to the UK's northerly county Yorkshire, where a surprising number of high profile studios have made themselves at home.

If that weren't enough, The Creative Assembly's move from high-end PC games to iOS is documented in a analysis of what larger studios must do to embrace a mobile space that is rapidly starting to mirror the ecosystem of triple-A development.

And, last but certainly not least, if you turn to page eight you will see some very big news about this year's eagerly awaited Develop Industry Excellence Awards.

Will Freeman
will.freeman@intentmedia.co.uk

Will

Natural selection

The popular Trials series has undergone something of a change. **Will Freeman** talks to RedLynx CEO Tero Virtala about creating Trials Evolution, the 'illusion of independence', and giving users your tools

How did you approach making sure *Trials Evolution* felt like more than a number of extra levels for *Trials HD*?
At the starting point, we knew that the core essence that makes *Trials* such a special game is ultimately the physics model combined with the simplicity of the controls for the motorbike. That remains the same in *Evolution*.

But in terms of how you play the game, and the various game modes, I think the latest game has truly taken the series through a huge evolution. While *Trials HD* was a great game, when you look at *Evolution* it's our biggest game ever, and I would be quite confident in saying that it is one of the most ambitious digital console games ever made.

So, in terms of the task of developing the game that is, at its core, similar to the previous game, how did you keep the team motivated. Was there enough in the process to excite and challenge them?
Well, when we made *Trials HD*, which was a huge success for us, we were left feeling still hungry. There were so many things we could have added to expand *Trials HD* at the time.

The only kind of covenant we had in our team when starting *Evolution* was that we

Trials Evolution has taken the core mechanics of its forebearer and thrust them into expansive new worlds (above). RedLynx CEO Tero Virtala (left)

wanted that core combination of physics and simple control to remain. We knew that on top of that there were numerous things we wanted do, such as taking it into multiplayer and fully utilising all the opportunities that online allows, and enabling UGC.

The challenge then was in seeing if it was possible, and it was. We managed to provide a physics-based world and a physics-based toolset for end users that would allow them not only create *Trials* tracks, but also almost any type of game.

So there were plenty of challenges along the way, and we set ourselves many difficult tasks, but in the end our team has been hugely happy to have been able to make the game we wanted, even if it took a bit more time and a bit more effort.

And you've given the consumer access to some of your own tools? That's bold.
It actually goes deeper than that. We gave them a very developed tool, because we have been developing our own tools for years.

When we first started to create *Trials HD* what we decided was that we wanted to share the same physics based tools with our users, and we knew that making that tool a good user experience for our customers meant making our entire game with the exact same editor. So when we started on *Evolution*, we made the game using the same editors that we are now providing to gamers.

Do you not worry that giving so much power to the consumer will make it harder for the next game in the *Trials* series to make an impact?
Giving so much to the consumer is highly motivating for RedLynx as a studio. It's been part of our philosophy that we need to push the boundaries always.

Now we have an editor that means people can create *Trials* tracks and other physics based games without us – tracks they want to play. Our thinking is that we'd have no idea what they'd create. We hope that it will be a huge inspiration for us, and offer us a huge challenge for our next big project.

Would you consider introducing a microtransaction model to *Trials Evolution*? The game seems perfect for it.
For *Trials Evolution* we simply don't have those plans at the moment. It is available to buy on Xbox Live Arcade for now. Of course, we have been studying the other markets and models very closely, and we can definitely see on the iOS side for certain games microtransactions have been very successful. And it's happening on other platforms too, and it seems that definitely those models are here to stay.

> ***"I would be quite confident in saying that Trials Evolution is one of the most ambitious digital console games ever made."***
>
> Tero Virtala, RedLynx

And we have done it ourselves. If you look at our latest iOS game *MotoHeroz*, it has microtransactions as part of the business model, but we've have tried to be very careful with how we introduce those. Our background is that we are gamers, and our philosophy has been that the development teams have a lot of freedom. The people that make our games have a lot to say on what they are designing, and we are trying to make the games that those developers would like to play. There's a lot of things that we have learned about how microtransactions should be utilised. But at RedLynx we try to design games that do not force people to use them.

For certain platforms microtransactions are certainly the future. For *Trials* we can't say anything yet because we haven't even started thinking about it.

At GDC you said the independence of being in indie can be something of an 'illusion'. What did you mean by that?
I of course can't speak on behalf of every studio that's been acquired, but for us clearly Ubisoft has been an extremely good family to join. In many ways we are more independent now than we have ever been.

There is definitely a truth to the fact that there is an illusion to the idea that being an indie – in that you are independent from a bigger organisation – gives you so much freedom and is so great. The fact is that most of those small indie studios are in a position where if they don't have enough money they are constantly having to search for publishers, producers and so on, and they have to work out the likes of contract details.

That can make them far away from being really independent where they can make their own decisions about the types of games they make and where and how they publish their games.

There is the possibility, of course, for things like venture capital financing. We had gone through that route, and we had a good venture capital investor, but some investors have a lot of power over decisions.

From the outside it might seem like a company is very independent, but the reality may be that it is not necessarily the founders or the games developers that are really driving the company forward.

Of course, there are independent games developers out there that really are independent, but what I'm saying is that the only really independent studios are those that are fully owned by their employees, who have plenty of cash so they can really decide what they want to do and how they want to do it, and really make all of the decisions about their games themselves.

Other independents have to make compromises all of the time, whether it is due to the fact existing contracts dominate what they are doing, or whether it is because they just don't have enough money.

develop
INDUSTRY EXCELLENCE AWARDS

David Perry to receive Development Legend Award

Earthworm Jim, Acclaim and Gaikai visionary to be honoured with accolade at July's Develop Industry Excellence Awards

DAVID PERRY IS to take to the stage at this year's Develop Industry Excellence Awards to be honoured with the Development Legend lifetime achievement accolade.

Having been specially selected by the *Develop* team, Perry, who brought us *Earthworm Jim* and *The Matrix* video games, will receive the award for the impact he has made on the games industry during his three decades in the business. Having previously developed over 100 titles on 29 platforms, sold his studio Shiny Entertainment to Atari, and co-founded Acclaim, and more recently cloud game streaming service Gaikai, Perry is consistently positioned as one of the most influential forces in the industry.

"A truly progressive games developer starting in the UK, David's career has touched every topic and theme of the business that matters: coding, design, publishing, distribution, licensing, creating original content, working with brands, free-to-play, online gaming, writing, cloud gaming and supporting students," said *Develop* and *MCV* editor-in-chief Michael French. "Over the last 30 years he's had multiple number one hits in his career, and the games and services he has devised or worked on have set the bar for many that followed. We look forward to welcoming him on stage this July to collect his much-deserved honour."

"I'm incredibly flattered by this award," said Perry in response. "I'm from Great Britain and have incredible respect for the people that have been recognised in previous years. My mother is going to be blown away; she thought she was buying me that first Sinclair ZX81 to do homework on."

Perry, who began developing commercial games as a teenager, is one of the longest serving members of the Game Developer's Conference Advisory Board, and is a popular speaker at events and universities across the globe including TED and MIT.

Now in their tenth year, the Develop Industry Excellence Awards will once again take place in Brighton at the Hilton Metropole Hotel, on the evening of July 11th.

20 awards are up for grabs for studios across Europe. This year we also introduce two new awards categories: Narrative Design and Use of Online. To book tickets contact Kathryn.Humphrey@intentmedia.co.uk.

www.developawards.com

develop iPad

Videos are available within the free iPad Edition of **Develop** on iTunes and the free Browser-based Digital Edition, which can be accessed at **develop-online.net**

THIS MONTH: Trials Evolution revisited **Wave, Cubic Motion and 3Lateral's Athanasius demo** Fabric Engine's tools development kit in focus

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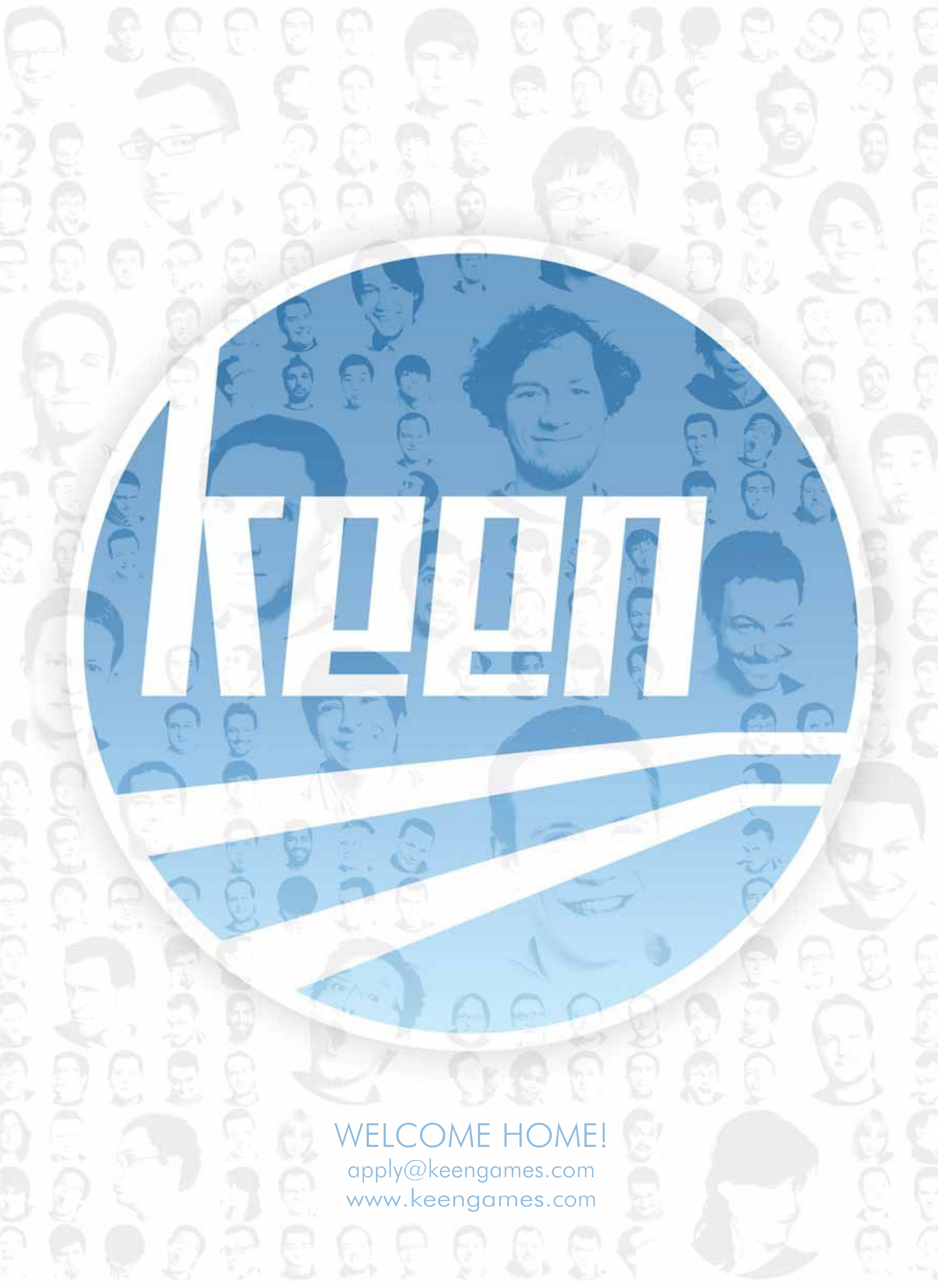
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//COMMENT: BUSINESS

Retail therapy

by **Nick Gibson**, Games Investor Consulting

GameStop
EVERY

While GAME in the UK flounders, in the US GameStop goes from strength to strength

MUCH HAS BEEN WRITTEN about the collapse (and subsequent resurrection) of the GAME Group, an event which appears to have shaken the industry's confidence in the retail business and has led to legitimate questions about its validity and role in an increasingly networked age.

This month I want to explore whether GAME's woes are indicative of the death of games retail and what awaits retail's future.

GAME's fall has been widely dissected with a plethora of causes posited by pundits ranging from management incompetence, over-aggressive expansion, over-reliance on Nintendo platforms and their casual player bases, the economy, network gaming's growth and failing to keep up with the times.

All of these have some bearing, but I believe that a critical reason is that the UK (GAME's heartland) is one of the most cut-throat markets on the planet in which aggressive discounting sees typical game prices plummet within weeks of launch and some willingly selling key titles below cost.

A BRITISH AFFAIR

Fascinatingly, another of its victims is the UK PC download market where uptake lags behind the USA due to the huge price discrepancies between download (with publishers reluctant to match retail discounts) and retail versions. This truly Darwinian market of the efficient and the inefficient is increasingly rewarding streamlined online retailers at the expense of the overhead-heavy high street.

So, are the UK's retail woes reflected globally? I believe that GAME's plight was a very British affair – it was simply too inefficient to survive the uniquely competitive UK market. In stark contrast is the success of US games retail juggernaut GameStop with annual sales approaching $10 billion, consistently solid profitability, a healthy balance sheet, a loyal customer base and a focus on markets, like the USA, in which price competition is noticeably less pronounced.

> ***"What is true is that retail's share of global software sales will continue to diminish at the expense of faster growing network games markets."***

That GameStop, with its gargantuan buying power, chose not to acquire either GAME or its cut-price assets but, instead, to steer clear of the UK high street, speaks volumes. As long as massive competitive pressure combines with inefficiency and the Pandora's Box of consumers' low price expectations, British retail's future will remain troubled.

Is games retail destined for extinction? Undoubtedly, but not for a very long time.

Although the global games software retail market has declined since 2008, the hardcore circa $13 billion centre of this market (primarily 360 and PS3) has actually grown. So will these high-value consumers continue to buy consoles? This hardware offers high-end, easy-to-use, big-screen gaming with tactile and multi-function controls at subsidised prices. Tablets, smartphones, smart TV and PC offer some of this, but none provides all of it. Hardcore gamers continue to diversify their platforms but are clearly still prioritising console and retail purchasing.

Next-gen systems may offer new releases in download or streamed form, but price competition challenges, growing game sizes, bandwidth restrictions, download caps and latency, combined with a surprisingly low console connectivity rate (circa 60 per cent at best) means that physical delivery of media is going to remain the standard in console gaming for the foreseeable future.

DIMINISHING RETURNS

What is true is that retail's share of global games software sales will continue to diminish at the expense of faster growing network games markets. This decline in turn puts pressure on listed retailers that fail to maintain growth while successfully diversifying their businesses. GameStop's concerted long-term strategy of diversification in the face of retail's overall decline is exemplary.

This has comprised of selling console and PC DLC and currency codes in-store, acquiring online games community Kongregate, download service Impulse, Spawn Labs and incorporating network gaming into its loyalty scheme. Led by console DLC and currency code sales, these activities have been hugely successful in generating $453 million in 2011, up 57 per cent over 2010.

The convenience and familiarity (and price discounting) of retail stores engenders enormous loyalty for many customers who would happily purchase digital items such as virtual currency and download codes in physical form. This is exemplified by the remarkable 600,000-plus subscriptions to the *Modern Warfare* Elite service GameStop sold within its first ten days on sale.

GameStop's success demonstrates why GAME is not indicative of the terminal decline of games retail, and indicates the direction that it can and probably should take, embracing network gaming products and services and building long-term customer loyalty, not just in-store, but also online. Even if the console business was to shift materially to downloads, I believe that retail would still be able to play a critical role not only selling hardware but also software, virtual currency and services to those unable or unwilling to do it all online.

Nick Gibson is a director at Games Investor Consulting, providing research, strategy consulting and corporate finance services to the games, media and finance industries.
www.gamesinvestor.com

//COMMENT: DESIGN

Can we save high street retailers?

by **David Braben**, Frontier Developments

Stores like Apple's prove there is still ample potential in bricks and morter – and chic glass – high street shops

THE WRITING APPEARS to be on the wall for retail, with the sad demise of retailer GAME.

The typical presumption is that they will survive for one month, six months or maybe even a year or two, with the gradual move to digital as the rest of our industry tries to avoid the all-but-piracy of second hand games passed-off as new.

In the wake of chains like GAME is already the debris of the independent retailers they helped oust in their turn. But is it really that bleak? No.

POSITIVE THINKING

I think that high street retail could be healthy in the long-term if it worked together with the rest of the industry. One of the thingsthe games sector lacks is a venue. Somewhere people can go to be part of a wider experience. As a comparison, look at the Games Workshop retail chain for table-top role-playing games, or indeed the Apple Centre retail stores. These provide venues where people can see the games, the accessories, what's coming, and just chat about what they care about, and 'hang out'.

My guess is many of the clientele of the Apple retail stores don't make a purchase on a typical visit. Many are kids – old and young – wanting to just play with the machines. But this is important. It builds brand loyalty, anticipation and community. They hanker after what they see, and will use 'pester-power' to make sure they eventually get it. GAME or its spiritual successors could do this too; in fact it is very well placed to do so. As long as the business model is structured in a way that such a retailer can benefit from a resulting sale of a game first discovered in their store – perhaps through discount codes – which with industry help could ensure a commission to that retailer.

Ten years ago, it was typical for retailers (and mostly indie retailers) to have playable demos of games on show for you to play, and so they were venues of sorts already. This went away as the big faceless chains including GAME muscled them into oblivion, and GAME remained steadfastly stuck in a particular version of what was the past even then. There the assumption is that selling games is no different to selling soap powder or cereal; arrays of brightly coloured boxes stacked on shelves, charging suppliers for that shelf space, and charging again for any subsequent sales, usually heavily discounted but with little additional service; little 'added value' when compared to the expert advice that those great indies used to give.

CAN TOUCH THIS

The rest of our industry, the publishing and development sectors, have not stood still for the last 30 years, and there is no reason to think they will do so in the near future. Over the last year or so we have seen a return towards physical elements contributing to games like *Kinectimals* with the material plush animals, *Skylanders* with its active plastic toys, and location-sensitive games on mobiles.

> ***"The fact that much of the software deployment in the future may be digital rather than via physical disc does not stop retailers getting involved."***

All those very much lend themselves to a physical retail experience. The fact that much of the software deployment in the future may be digital rather than via physical disc does not stop retailers getting involved; there is no reason a digital portal cannot be part of their offering. Just look at the Apple Centres. As we move towards what is often termed 'ubiquitous computing', where everything from your fridge to your cooker to your car is internet-enabled, we will see ever bigger changes and most likely this move towards physical experiences will continue. Again, all this is very well suited to physical retail.

SMELL THE COFFEE

So perhaps there is a place for retailers as such a venue. One concern may be whether there is sufficient revenue to support such shops, so it may need to be supplemented by other income sources, but nevertheless it should be possible with time to build a valuable customer base. Perhaps they might sell decent coffee, cementing themselves as a 'venue' for other family members who might not want to come just for the games. Then they would be great places to have on any high street. Maybe they would give the huge numbers of shoe shops, mobile phone shops, and – yes – coffee shops a run for their money.

David Braben is the founder of Frontier Developments. Best known as the co-creator of *Elite*, Braben has contributed to a number of other projects including *Frontier: Elite II*, *Thrillville*, *LostWinds* and *Kinectimals*.
www.frontier.co.uk

//COMMENT: MOBILE

Getting Physical

by **Will Luton**, Mobile Pie

GAME
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Will Luton believes GAME's struggles are a sign that retail is no longer one of the lynchpins of the industry, and that a powershift towards digital is emerging

AS YOU ARE READING this (in the future) the fate of retailer GAME has been determined. Here in the past, as I write these words, it has hit the wall and come out the other side with Opcapital, albeit slightly slimmer.

The retailer's downfall has been blamed on a host of surmountable problems including over expansion, erosion of customer service policies, poor web presence and an out-dated retail experience.

These are all solid assumptions, so it is likely a new management team can return it to profitability like its overseas contemporaries. Yet one factor that cannot be ignored is the impact of digital distribution.

HIGH STAKES

The gamble on GAME is one on how long it can continue to make money from selling access to games through physical artefacts, whilst online and supermarkets muscle in with the same model and digital slowly undermines it.

This kind of erosion isn't unique to GAME; it is a concern for every single company that delivers a digitisable product in a physical form on the high street. Film, music and books are at various stages of the transition to complete digital distribution.

Digital distribution in games is of course already here, but so far is only seriously impacting non-traditional content, such as short-form arcade-like titles. Long-form cinematic console games continue to exist in a bubble almost away from these changes.

Why? Because the prices are set in favour of the retailer middleman.

The technology is here, as PC gaming via Steam or other direct download portals continue to show, but pricing remains on a level or higher than at retail, despite ostensibly lower overheads.

> **"It is still more expensive to download a title over the internet than to walk to the high street and purchase it from a living, breathing human."**

It is still more expensive for customers to download a title over the internet than it is for them to walk to the high street and purchase it from a living, breathing human, on a manufactured disc, inside a box that has been transported thousands of miles to be placed on a store shelf in a heated bricks and mortar building.

This is clearly wrong. Consumers, the least loyal people in games, know it to.

When prices on digital marketplaces realign in reflection of drastically reduced overheads, new business models thrive and innovative content appears. We have seen it in social, mobile and independent PC markets. But console and handheld gaming is mostly untouched.

OPPORTUNITY KNOCKS

The transition may not be good for existing businesses which have heavy investments in retail and development infrastructure, but it is good for consumers and new, hungry start-ups entering the industry.

There is a real chance that if the console space doesn't embrace digital properly soon, someone will come and take the money Sony, Microsoft and Nintendo are leaving on the table. Google, Apple and Valve are all tipped for an assault on the living room in the next 12 months.

This could be a serious threat. As the old world still looks towards more power and more polygons, they could get undermined by better, easier distribution and prices.

GAME's stumble, caused by erosion from digital distribution or not, should not be ignored. It is an indication of waning retail importance in our industry. The power shift has started and will have huge repercussions. Do not ignore it.

Will Luton is creative director at the award-winning boutique studio Mobile Pie. They create delicious own IP and work on licenses, with a partner list that includes the BBC, Orange and Hewlett-Packard. Follow Will on Twitter at @will_luton, or visit **www.mobilepie.com**

//COMMENT: STUDIO MANAGEMENT

Choose your battles

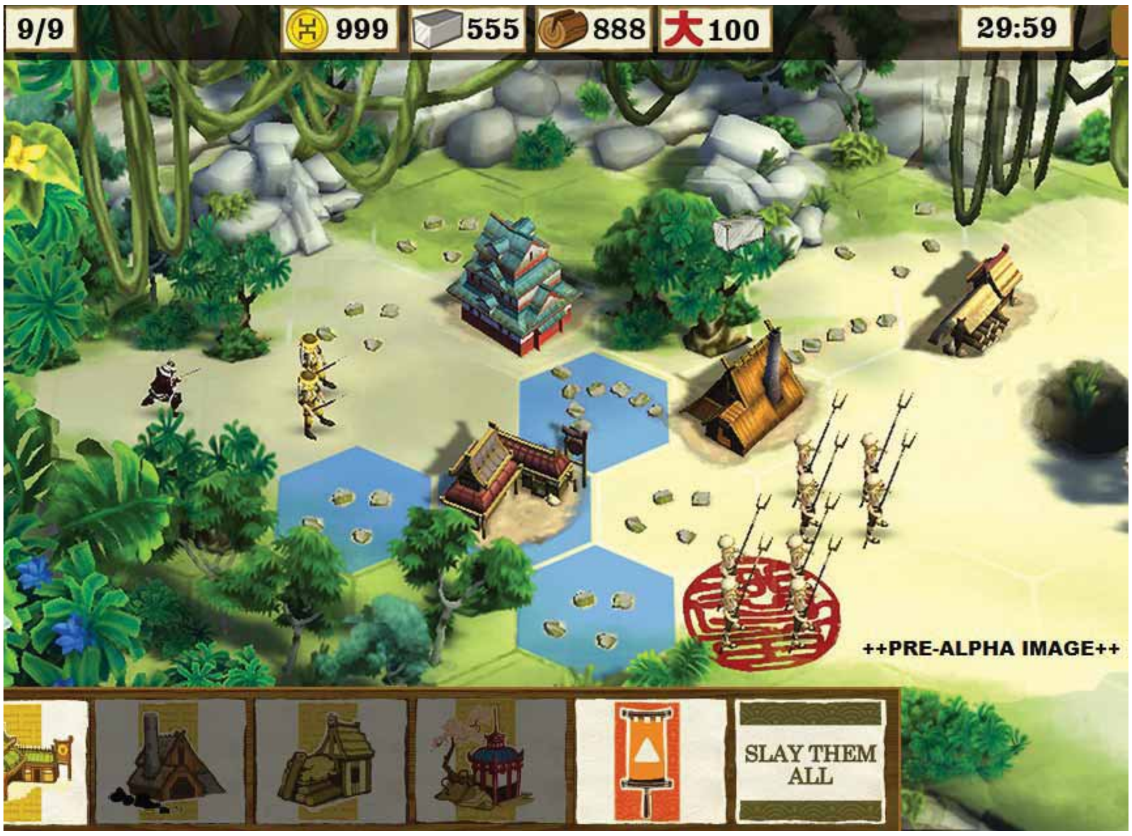
Tim Heaton, The Creative Assembly

WE RECENTLY ANNOUNCED *Total War Battles: Shogun*, Creative Assembly's first mobile game. It's a strategy game reconfigured from our PC *Total War* designs but built for shorter playtimes and a shallower learning curve.

We think it will stand alone on iOS and Android (and possibly other platforms to come), and we made it for several strategic reasons. Interestingly, but not totally surprisingly, some of the early responses from one or two of our hardcore fans wasn't totally positive. "Wow, I know people will get angry over this" said one.

That's an interesting response. I think they're worried that any time we spend on something other than the tent-pole release of *Total War* will somehow diminish it, which I think is the wrong assumption. We're very careful about that.

Once we decided to make a mobile game we built a 'start-up' team away from the main *Total War* team, mainly made up of new staff. We did this to ring-fence what we were doing on both PC and mobile. We were worried we'd just not be able to resist moving people around to solve short term scheduling issues within the main team, and slowly we'd rob Peter to pay Paul and fudge our mobile opportunity.



Shogun: Total War Battles (above) takes The Creative Assembly's famed RTS series to iOS via Unity

STAY ON TARGET

Focus is one of the key tenets of the studio, and it's so much better to let teams understand they have priorities that won't change at management's whim. We've deliberately built a wall – both metaphorically and in reality – between the *Alien* console team and the *Total War* team too.

We also needed some fresh eyes to look at *Total War* in a new way. We're very protective of the *Total War* design pillars – perhaps too protective at times – and we needed someone not afraid to challenge our assumptions on a new platform. We wanted the team to be led by someone who had a strong history of games development, but also had an entrepreneurial spirit. We were lucky to find someone who had both.

Creative Assembly also likes to create its own bespoke technology. We have very specific needs for our tech, and we like to stay in control. We use third party libraries where it makes sense, but we like to make our own tools, and we still like to get pretty close to the hardware when we can. We constantly appraise what's available at all levels, but so far we're happy with our decisions.

However, for *Total War Battles* we deliberately didn't want it to be a technically led project. We wanted to prototype quickly and visually, and we wanted to keep our options open to move onto different platforms quickly.

We chose Unity as our engine provider, and we're confident we made the right decision. It has allowed us a relatively easy technical learning curve and a great set of tools, and allowed us to get on with making the game. With the current exception of Windows Phone 8, we can get onto the platforms we want far more simply than with a bespoke engine. We're quite excited about Windows Phone 8, so we hope to be there at some point.

> ***"There are design ideas defined by some of the unique aspects of mobile, touch screen and so on that could influence future PC work."***

Most importantly though, we're making a mobile application – and other things we're not ready to talk about – not just because they're extra *Total War* products, but because they are helping us build our knowledge.

The future is interconnectivity. Whether it's players taking a game with them when they travel, augmenting gameplay with mobile apps, or supporting activities on another device, there are already many examples, and not all of them great. We want to understand what our options are and how we can deliver them, and we're aiming for best-in-class, so we want to control them.

A TWO-WAY STREET

Equally, there are design ideas defined by some of the unique aspects of mobile, touch screen and so on that could influence future PC work. In addition there's the integration of the social aspects of gaming, which we're very interested in, and which are relevant not only to individual platforms, but even more so for reaching our cross-platform communities seamlessly.

I think some 'traditional' developers see mobile and social as elements to be farmed out as support operations, or worse, as distractions. We see them as opportunities to drive core strategy games in the same direction as our players.

For more on Total War Battles, turn to page 40.

Tim Heaton is studio director at The Creative Assembly, the UK-founded studio behind the acclaimed *Total War* series of PC games, as well as numerous other works including original and licensed products.
www.creative-assembly.co.uk

THE MONTH AHEAD

A look at what May has in store for the industry and beyond

MAY 15TH
Diablo III. Demons are back yet again, but maybe this time they'll win? No, probably not.

MAY 16TH
Develop Quiz. It's that time of year again to let your hair down and show the industry how clever you really are.

MAY 17TH
Flash GAMM Moscow 2012. A Russia-based industry event focusing on Flash, social and mobile games.

MAY 17TH
World Telecommunication Day. Raising awareness of technology everyone uses and looses nearly everyday.

MAY 18TH
Max Payne 3. Rockstar returns to the gun-toting franchise, resisting its urges with regard to open-world.

MAY 22ND
Casual Connect Asia. Casual Games developers come together to network and speak about the sector.

MAY 25TH
Dragon's Dogma. Capcom releases a unique and innovative open-world fantasy RPG with dragons.

MAY 25TH
Ghost Recon: Future Soldier. A Shooter in a futuristic setting. More outside-the-box thinking in games. Not really.

MAY 25TH
Mario Tennis Open. You'd think with all these sports and jumping Mario would be trim by now. He isn't.

MAY 25TH
Towel Day. Not celebrating the absorbent fabric, but rather Hitchhiker's Guide to the Galaxy.

MAY 25TH
Geek Pride Day. Finally, an occasion to celebrate the games industry's knack for nerd chic and spec wearing.

MAY 31ST
World No Tobacco Day. Another chance for more people to tell you how best to live your life.

DEVELOP DIARY

Your complete games development event calendar for the months ahead

NORDIC GAME
May 23rd to 25th
Malmo, Sweden
nordicgame.com

The ninth annual Nordic Game conference brings together a significant number of developers from this increasingly prominent region in the industry.

The increasingly high profile event is set to include an Indie Night, the Nordic Game Awards as well as its usual main conference tracks.

There is also set to be new aspects introduced to the event, such as an enhanced career and recruitment focus likely to appeal to those considering a move to the Nordics.

MAY 2012

DEVELOP QUIZ 2012
May 16th
London, UK
www.develop-online.net

MCV/XBOX 360 QUIZ 2012
May 17th
London, UK
www.mcvuk.com

CASUAL CONNECT ASIA
May 22nd to 24th
Suntec, Singapore
asia.casualconnect.org

NORDIC GAME 2012
May 23rd to 25th
Malmo, Sweden
nordicgame.com

JUNE 2012

E3 EXPO
June 5th to 7th
Los Angeles, US
www.e3expo.com

UBIQ PARIS
June 18th to 19th
Paris, France
www.ubiq-europe.com

GAMEHORIZON
June 27th to 28th
Newcastle, UK
www.gamehorizonconference.com

JULY 2012

DEVELOP CONFERENCE
July 10th to 12th
Brighton, UK
www.develop-conference.com

DEVELOP INDUSTRY EXCELLENCE AWARDS 2012
July 11th
Brighton, UK
www.develop-online.net

AUGUST 2012

EDIBURGH INTERACTIVE 12
August 9th to 10th
Edinburgh, UK
www.edinburghinteractive.co.uk

GDC EUROPE
August 13th to 15th
Cologne, Germany
www.gdceurope.com

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BETA

DEVELOPMENT FEATURES, INTERVIEWS, ESSAYS & MORE

Advice for games audio pros

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Zynga Uncovered

Key staff at the world's most controversial developer on what makes the company tick, and the criticism hurled at the studio, p18

Lionhead's new Fable stars

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The Creative Assembly goes mobile

p40

Yorkshire's dev hub in focus

p45

Saints & Zyngas

EA fears it. Some developers despise it. Everyone has an opinion on it. But a rare visit to the most talked about games creator of the 21st Century proves most are wrong about Zynga. **Michael French** investigates

The decor of Zynga's vast offices (above) don't exactly scream 'evil', the extreme criticism its detractors sometimes choose to make

THEY ARE building a funfair when *Develop* visits 699 Townsend St on a crisp, sunny March morning.

The rides and games are filling out the cavernous foyer of the building, apparently once a shopping mall. The digital games firm that poetically took over occupancy, replacing a world of physical goods, fills out the floors above.

Elsewhere, developers' dogs roam the halls, off their leashes.

The staff's murmuring, generally upbeat hubbub rings through the air, with workers readying for lunch or making their way down to the on-site gym, yoga lounge or basement basketball court.

A huge celebratory neon 'PLAY' sign hangs over the reception desk, itself adorned with tight security that is incredibly hi-tech – cameras, scanners, a digital screen reminding you of the NDA – but not intimidating.

This is Zynga HQ. And yes, *Develop* is just as surprised as you.

Isn't Zynga supposed to be evil?

On the other side of downtown San Francisco, snatches of conversation at the W Hotel bar – the best hang-out during the Game Developers Conference – purport to tell you everything you should know about Zynga.

"They just clone what's out there and milk it."

"The backlash? We had that. And then a pro-Zynga backlash. But now we're back on the backlash."

"Fucking social games, man – they're awful."

ZYN CITY

You don't have to do much digging to find the peculiar scepticism about Zynga and the social games boom it personifies.

Facebook games aren't 'real games'. They once spammed friend feeds on social networks and their 'free' elements just eat money. Then the deeper, vicious claims: Zynga clones games and makes the concepts it copied profitable.

One remark from Zynga CEO and founder Mark Pincus ("I did every horrible thing in the book to get revenues") has been used by outsiders to define it time and again.

The other criticisms you will have heard already. Zynga games are worthless. They feed players the same content over and over. The company hates developers.

Zynga must be doing something right, though. It has 240m users on Facebook a month. After flotation on the New York Stock Exchange last year it has a market cap of $1bn. It has almost 3,000 employees – many of its top execs are staff drawn over from the 'classic' world of console and PC games, respected EA faces and famous designers. Each game it releases – or buys through acquisition – seems to top the next in terms of size and scope, with regular updates, huge cash generation, and free access. It has launched a platform, Zynga.com, specifically for third parities.

Zynga created something from nothing in just five years. And that's why everyone has an opinion on its resultant notoriety.

So what does its staff have to say? We asked them. Their responses may annoy its doubters further, but all prove this is a company teaching every other developer a lesson.

THE WORLD ACCORDING TO ZYNGA

ZYNGA SAN FRANCISCO

Corporate HQ. Includes *Zynga Poker, FarmVille*, *CityVille*, and *Mafia Wars* teams. Zynga founded in 2007. Acquisitions grew the tech, IP and talent base, including: YoVille (July 2008) MyMiniLife (June 2009) Serious Business (Feb 2010), Flock (Jan 2011), JamLegend (April 2011), DNA Games (May 2011), and HipLogic (Aug 2011).

ZYNGA EAST

Baltimore. Formed in 2009 with the hiring of designer Brian Reynolds, known for his work on *Civilization* and other sim games. He would go on to create *FrontierVille* for the firm.

ZYNGA INDIA

Bangalore. Zynga's first foreign office was founded in February 2010. Its growing team is focused on maintaining existing franchises, and offers QA and customer service support.

ZYNGA LOS ANGELES

Opened in early 2010 as the firm's second satellite studio, charged with devising new games and tapping into the city's creative talent. The Zynga Los Angeles team would go on to create strategy game *Empire & Allies*, devised up by former EA LA *Command & Conquer* designer Amer Ajami.

UPWARDLY MOBILE

Sean Kelly, one of Zynga's mobile masterminds on the smartphone revolution – and accusations of IP theft

"WE'RE NOT TAKING anyone's art or source code or anything like that."

Develop is half-way through the question and Sean Kelly, GM of mobile games at Zynga, is already offering a fairly robust defence of the biggest accusation industry haters have made against the firm: theft.

The topic is *Dream Heights* vs *Tiny Tower*.

The former is a Zynga mobile game, launched in January, which the developer of the latter (NimbleBit) said had clear similarities to its own award-winning tower-building game.

It was just one example out a handful where other companies have grumbled about Zynga's games seeming too close to comfort to their own.

Zynga has never denied such similarities, but it does bristle at slurs.

When we ask Kelly about this attack of the clones, he's clear about the company strategy.

"People may believe that we sit around talking about individual developers and their concepts – but we focus on a much more service and platform-oriented approach and want to really reach the broadest number of users with the most fun and the best products that we can."

He adds: "Our mission is to be the best. And when we see a genre or game our players are clearly gravitating towards, we'll examine it and figure out how to innovate, how to make sure that we're producing the best quality, and that we're focused on anything that we need to do that takes a concept or a genre to make it social."

It's shrewd, yes, but sound thinking. Copycat games are rife in social networking, anyway.

In fact, copycat games design is rife games in general, he points out.

"We spend a lot of time looking at what makes something the best quality game on the market and really analysing that continuously – which other games developers do as well, by the way.

"That's constantly happening and things are constantly being reinvented and repurposed. We're certainly respectful of IP. We're not taking anyone's art or source code or anything like that, and I think that kind of constant reinventing helps the whole industry. It basically moves the bar for everybody."

KNOWLEDGE IS POWER

Kelly points out that Zynga's scale and the power of the brands it has created makes it an easy target when a rival developer wants to complain.

> "Our mission is to be the best. When we see a genre or game our players are gravitating towards, we'll examine it and figure out how to make sure we're the best quality."

"We're certainly a lot more noticeable and people pay attention to what we do because of our past success, and people are betting on us in the future. But they may ascribe to us more awareness of a specific game or specific market segment than we actually have."

But Zynga is hugely aware of trends both tiny and gigantic – it wouldn't be the fastest growing games developer on the planet otherwise.

And now part of its focus is on smartphone and mobile games, the only part of the games industry that anyone can claim to have grown faster than Zynga itself.

Kelly is vice-president of product development at Zynga Mobile, overseeing new games made at the San Francisco HQ and at its remote studios. The mobile division is moving at quite a pace – it launched nine games in 2011, and has already released a handful this year.

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BONERS
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B O E T

Kelly joined Zynga early, working at first on the less glamorous *FishVille*. But he was an entrepreneur himself prior, hailing from his own social start-ups and a stint at Microsoft.

He says "the fact that Zynga's always thought of itself more as a service and a platform vision versus a singular product" attracted him to the company.

Aesthete developers might be rankled, but his description sums up how Zynga has made a business out of free games, connected together by promoting and encouraging Facebook friends to work together and grow their virtual farms, fish tanks or tower blocks.

It's Kelly's job to help see those same interactions take place on mobile – an increasingly important platform for Zynga.

"These things are cultural shifts. It's a tidal wave of shifting emphasis on your connections and the devices are just getting better and better. Smartphone penetration is going to be a gigantic opportunity and I think any company that has a mission, like we do, to be social must go where people are – and that's increasingly on mobile."

ZYNGA CHINA
Beijing. Zynga bought Chinese social games firm XPD Media in May 2010 to give it its first Asian foothold, and an entry point into a games market driven massively by virtual goods sales.

ZYNGA BOSTON
Formerly Conduit Labs and acquired in April 2010. Zynga life dispensed with its music web games and put the team on *Adventure World*. In 2011 Zynga grew the team with the acquisition of Floodgate Entertainment and the hiring of its CEO – Paul Neurath, also known for founding Looking Glass.

ZYNGA JAPAN
Tokyo. In June 2010 Zynga teamed up with Japanese web giant SoftBank for a joint venture. It bought Tokyo studio Unoh, renaming it Zynga Japan. At first the office localised Zynga titles for Japan. Earlier this year it launched original title *Montopia*, a 'monster battle RPG' made at the studio itself, for Japanese gamers.

ZYNGA DALLAS
Texas. Founded in early 2009 as Bonfire Studios by former employees of Microsoft-owned Ensemble Studios. Released *FarmVille*-like *We Farm* for iOS in summer 2010. Acquired by Zynga in October 2010. A year later, the team launched *CastleVille* for Facebook. ▶

ZYNGA, THE CONSOLE OF THE 21st CENTURY

Why former Xbox and EA man **John Schappert** is right at home as one of Zynga's top dogs

ONCE UPON A TIME John Schappert was Mr Console.

He co-founded Tiburon, the studio that would go on to build the hugely successful *Madden* games.

He was subsequently one of the most committed EA execs, eventually looking after worldwide publishing, its online platform group and EA Interactive amongst others.

He even worked a tenure at Xbox as head of its Live online games division.

But last year he was Zynga's biggest catch; the console pro poached to the world of free browser and mobile games, becoming COO of the most watched new firm in games.

These days, he tells *Develop*, "you don't need anything" to be a gamer or in the games business.

The traditional part of the business "has always been limited by, 'gotta buy the hardware', 'gotta buy the software', 'gotta go to retail'… there's all of these barriers that the industry has been living in before."

And as for the actual audience: "Every device you have is a gaming device and everyone is a gamer. And when you do that… a quarter of a billion people a month play your game."

NEW INDUSTRY, NEW ROLES TO PLAY

What tempted him to make the jump to Zynga?

"It's where I saw gaming going. When I was at Electronic Arts I worked very closely with the group that had casual, mobile and social, and you just saw the explosive growth that was happening in that. It's going from a couple of hundred million gamers to everyone being a gamer, billions of people.

"I've been in the industry my entire career. I love games, but I look at my own habits: I have fewer and fewer times where I could dedicate 40 hours to a longer play time experience. But I find myself dedicating ten, 15 minutes here and there to these short-burst experiences."

It's this personal thinking that in-part seems to inform his overall view on the business. He says pain lies ahead for the parts of the traditional games business that is trying to ignore or write off the social games boom.

"People have to change. You have to think about things differently.

"You can't think about $60 games and an installed base of a console.

"You've got to think 'where are all the gamers today?' They're on that iPhone, they're on Android devices, they're on tablets, Macintosh, they're on that PC, they are everywhere."

He adds, with old colleagues, former employers and existing friends on his mind no doubt: "And by the way, they are still on consoles too."

> ***"One day we'd like to have a billion people play on our platform. But we can't do it all. So we can work with independent studios to bring their games to the masses."***

PLATFORM GAMES

Although responsible for all of Zynga's day-to-day runnings, Schappert regularly points his conversation with *Develop* back to the firm's new Zynga.com publishing platform for third-parties.

Cynics may snort, but the confidence of this move is reassuring.

Schappert pitches it as it is both an antidote to the things social games were once criticised for (and which Zynga exploited) and an answer to the problems they currently face (which Zynga arguably exacerbated).

It takes the pressure off of spamming a feed or nagging real world friends for virtual items or help via Facebook, instead asking players to run dedicated friends lists and play at Zynga's owned site. And it provides a way for smaller studios to cut through the noise of social games by piggy-backing off of Zynga's scale and strength as a source for social games.

"You don't have to invite other players to your Facebook friend list so that they see what you did on the weekend or what your baby photos look like and other things you probably don't want to share with the world, but you can still play games with them," says Schappert.

"When we have people play together, they play longer. They enjoy their game more and they continue to come back more often. They stay engaged longer and they retain longer. It's a better experience for everyone. The more we can connect people together and the more social we can make that game, the more of a win we get which is really why we've done Zynga.com."

A number of third-party firms finding their way in social and not wanting to be left behind have signed up to put games on the service – from Konami to the UK's own Rebellion.

"What we've realised is unlike the past space about becoming a publisher, right now the great thing is you don't need to buy new hardware, you don't need to have a disc distribution centre and anyone can make a game. But the irony is that there are more games out there than there are people to play them."

A BILLION PLAYERS

Zynga, he says, genuinely wants to help others cut through. It won't help all of them, of course – and it's here that you realise exactly why a former EA and Microsoft exec was targeted to help run Zynga – but it does genuinely want to offer something back to select partners at least.

"One day we'd like to have a billion people play on our platform," he says. Zynga is currently at 240m a month. That's just 25 per cent of the way to the target. "We'd like to get a billion people to play, but we realise we can't do it all. We don't have to develop them all but we can work with independent developers to take their games and bring them out to the masses."

ZYNGA WITH FRIENDS
Texas. Formed in 2008 as Newtoy, and creator of *Chess With Friends* and *Words With Friends* for iOS and eventually other mobile platforms. Acquired for $53m and renamed by Zynga in November 2010. Released *Hanging With Friends* in summer 2011 and *Scramble With Friends* in January.

ZYNGA GERMANY
Frankfurt. Zynga bought German game engine firm Dextrose in September 2010 to give it an edge in developing web games, specifically around HTML5.

ZYNGA AUSTIN
Texas. The renamed Challenge Games, known for online card games, bought in summer 2010 for $20m. In April 2011 Zynga bought MarketZero, responsible for a site that tracked career stats of online poker players, in order to hire its staff. Last year the team unveiled HTML5 game *Zynga Poker Mobile Web*.

ZYNGA NEW YORK
Founded in 2005 as Area/Code and dedicated to building 'big games' which 'spill out over the edges of our screens'. Best known for addictive mobile game *Drop7*, released in 2009. Bought by Zynga in January 2011. Later that year Zynga also acquired AstroApe Studios, adding that team to its New York complement.

BOB THE BUILDER

Famed designer **Bob Bates** explains why building games for social networks isn't evil

SO IF John Schappert shows Zynga can attract console/publisher talent, and Sean Kelly reflects Zynga's upstart web hero legacy, then Bob Bates is the smart answer to what the firm's detractors claim.

He's the first to bring up the accusations made against Zynga, but is no paid PR voice.

Now chief creative officer for external studios, he started out by essentially vetting the company while a consultant. His job now also demands he bring a level of game design class, that Zynga's top brass likely realise their games need to become more sophisticated. And more legit.

Bates calls himself a "roving game designer" at Zynga. Formally, he oversees the traditional concept greenlight to pre-production and so on cycle. Informally that means regular chats with design teams across the Zynga business. He is, in essence, Zynga's Miyamoto.

The designer has been active in the industry for 25 years, having overseen over 40 titles of varying types, and having written some well-known tomes on making games, and most recently working as a freelance consultant designer.

Of course, this esteemed career many will see as the antithesis of what they think Zynga is – an unstoppable force of creative freedom meeting the immovable object of data-driven games creation.

But you can marry strong design ethics with the analytics that helped social games get so big, Bates insists.

"Yes, Zynga is a really metrics driven company," he confirms. "But we use those metrics in interesting ways."

NUMBERS GAME

He points out how *The Pioneer Trail* (formerly called *FrontierVille*), Zynga's social game set on the cusp of the American culture's geographic expansion across the Old West, grew creatively thanks to player data. Fittingly, the game pushed Zynga beyond the point of understanding that players love stories, not just clicking virtual items. The game launched in 2010, and its users soon became hooked on reading letters that they received from NPCs.

"Zynga called me up and said 'We need more of this story and narrative stuff as it turns out players just really like it.' That's what got me in as a consultant here.

"That's a great example of metrics driving design, rather than ruling it with an iron thumb.

"The impression people have of Zynga is that we have little dials and every time someone does something significant we twiddle them and change things to manipulate them. But it's really not like that."

> ***The impression people have of Zynga is that we have little dials and every time someone does something significant we twiddle them and change things to manipulate players.***

BETTER BY DESIGN

Bates says he had heard all the bad claims about the company before signing his employment contract.

"I was apprehensive – that's the best word. Like I say, I consulted with Zynga for the last six months of 2010, because of that apprehension. You hear a lot of stuff about Zynga, and if you want to learn about a company like that from the inside, a consultancy gig is perfect.

"But I very much liked what I saw, obviously."

He even dissected one of the firm's defining early games, *Mafia Wars*, as part of his research.

"I started playing it in November 2009 because a European client was interested in that space. I was determined not to spend money on that game. Every time I wanted to spend money I would stop and ask why that was. So I slowly dissected that game, I ripped it apart until I was over level 2,000. That's a lot of *Mafia Wars* time, I can tell you. When you look at a game that closely you learn things to take advantage of – where the balance was off slightly and where I could earn more XP than I was supposed to. But two weeks later that loophole would be closed. [Presumably by the dev team.] And that happened pretty damn often."

FRONTIERVILLE
BETA

This helped open his designers eyes to the power of free, social games.

He explains: "People don't really understand that a large part of what Zynga does is sell entertainment.

"The real trick in social is to get lots of people playing, and have them be happy for a long period of time.

"There are different kinds of players, people who play with different things in mind. We make money from the group of people that like to decorate and customise a space of their own. We make money from people who want to show off how good they are through special items. We make money from the competitive people, who want to be higher in the leaderboard so we sell them power-ups.

"But a percentage – and I mean millions of people – will be happy to play for free. If you design in a broad enough way to keep that mass of free people happy, you will have those other groups emerge, develop, and spend."

Zynga is easily described as a bully. Its critics say it exploits the little guy, whether a developer it has 'taken' an idea from, or an individual buying virtual goods. But Bates flips that on its head. In his terms, every player is valued for contributing to the scale of an audience, and that's more important than what they are worth.

"People can be viral and social and play our games en masse and grow the audience. Or they can give us money to get farther quicker. We don't really care which. They don't have to spend money – they might feel the urge to spend money to advance, but they don't have to, they can wait or be social.

"It's just that in a Zynga game you can go as far in every direction as you want."

ZYNGA SEATTLE
Engineering and coding team formed in late 2010 to tap into the region's rich games dev scene. Output includes Zynga's first hidden object game *Hidden Chronicles,* launched in January this year and developed by "some of the most talented women in casual and social game design and entertainment".

ZYNGA MOBILE UK
Formed in 2009 as Wonderland Software by former Lionhead employee Matthew Wiggins. The studio created *GodFinger* for Ngmoco before being acquired by Zynga in April 2011.

ZYNGA TORONTO
Canada. Zynga bought the assets of apps firm Five Mobile in July 2011, as part of its growing mobile ramp-up.

OMGPOP
New York, USA. Formed in late 2006 as a social network and dating site with games. Best known for recent release *Draw Something*, then a whirlwind flurry of popularity. And subsequently Zynga's "biggest buy", acquiring the relatively small outfit for $180m. Now part of the Zynga New York office.

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Easy listening

Develop brings you sound advice from some of the games audio sector's sharpest minds. Whatever your discipline, the following pages should be music to your ears

In the 12 month's since *Develop's* last Audio Special a great deal has changed in the games industry, all of which reshapes the landscape for those undertaking sound work.

Triple-A on mobile has moved from being a whisper about the future to an everyday reality, meaning file size is now more important than ever. New tools have emerged in the audio sector that look set to reinvent tried and tested techniques. More talent and methods are crossing the bridge that connects with Hollywood. And in the not too distant future, the next-generation of consoles loom, jostling for the attention of your audio staff, and bringing them a wealth of new opportunities and challenges.

With all that in mind, here we bring you a collection of six specially written pieces from games audio's finest, all of which offer advice and insight into particular disciplines within the sound and music specialty.

From pieces on generative audio's ability to squeeze console quality scores onto mobile platforms, to a detailed look at keeping voice production for vast MMOs and RPGs under control, our contributors have a wealth of knowledge to share.

Elsewhere they've tackled the merits of sound libraries constructed with games in mind, and addressed how a simple extension to the VO recording process can also grant developers with quality facial animation data.

The value of standardising working practices in recording studios is also emphasised, while the role technology can serve in empowering composers undergoes detailed analysis.

Whether you're a games audio professional yourself, or just work with colleagues or partner companies that specialise in sound, every one of the following six pages serves as essential reading.

Contents

24 – How to Manage a Monster
Looking to do voice production for a full-scale MMO or RPG? Side offers advice

25 – The Generation Game
Generative audio has evolved, and with tools like FMOD Studio, it's shaping the future

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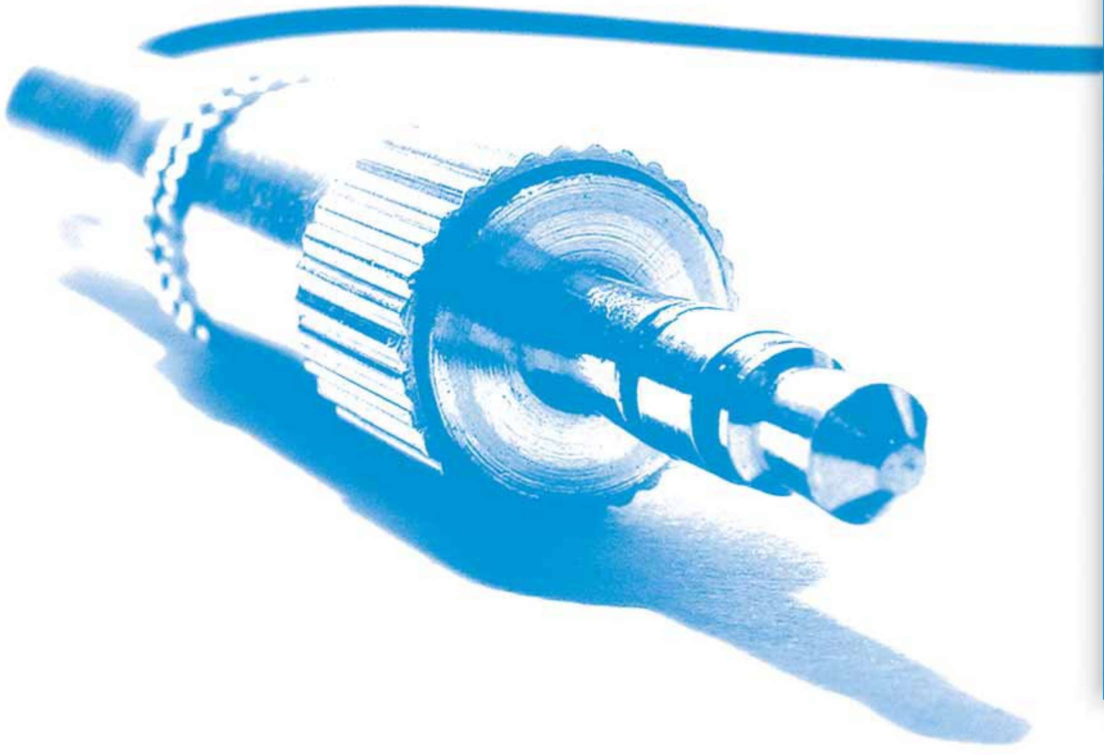
Wave and Cubic Motion look at combining the VO and facial animation processes

28 – All for one
Can library sound truly promote creativity in sound design? Soundrangers argue the case

31 – Setting Standards
PitStop Productions provides advice on standardising the flow of work in studios

32 – Wwise words
The role of the composer is evolving with the help of tools like Wwise, suggest its users



How to manage a monster

Overwhelmend by the logistics of voice production for a vast MMO or RPG with hundreds of thousands of words to complete? Side production manager **Sini Downing** is here to put your mind at rest

Side's Siri Downing (above) says the games industry is now becoming recognised internationally for its achievements in scripting and storytelling; as seen in Star Wars: The Old Republic (right)

WITH SCRIPT SIZES for MMO's and large RPGs now often running into the hundreds of thousands of words, where do you start to efficiently run and track voice production for these projects whilst still delivering engaging, believable performances?

Over the last few years Side has worked on a number of projects with some pretty enormous scripts including *Fable III*, *Dragon Age 2*, *The Witcher 2*, and the big daddy of them all, *Star Wars: The Old Republic*.

So here are a few tips to help make the process easier.

PEOPLE POWER

Let's start with the people. Just as we have a dedicated production manager working on each project, it is essential that there is one point of contact from the developer's side as well. This might be the producer or a member of the audio department, but it needs to be one person who can communicate all of the dev team's needs to the voice production team and vice versa.

Next, some sense of scale: the script for *Fable III* contained about 460,000 words; or over 45 hours of recorded speech. Compare that to 25,000 words in a typical feature film script and you get some idea of the size of these games. The traditional method of just printing out the whole script for each actor isn't going to work. They are just too big. So how do you provide the actor enough information to make sense of each line without overwhelming them?

We've come up with some great tools that can make the voice production run smoothly and get great performances from the actors, but they require a script from the dev team that contains the basics: the lines, filenames, consistency in character names, and context. There must also be some way to keep track of lines as they get added, changed, or deleted.

An easy way is to give each line a unique ID – usually numerical – which is never overwritten. That way if a line is changed but retains the same filename as the old one there's no confusion during recording or post production.

> ***"The script for Fable III contained about 460,000 words; or over 45 hours of recorded speech. Compare that to 25,000 words in a typical feature film."***
>
> Sini Downing, Side

But great performances aren't contained in spreadsheet cells. While it can be tempting to format scripts into reams of individual lines per character, the performers need to see the full scene, have context and a way to find their lines easily, whether that's with highlighting or putting their lines in bold font. Along with bespoke scripts for the actors, it's useful to provide the director with enough information to not only guide the actors, but also help manage the recording session. Using a script tool which can jump to the character's next line will ensure no lines are skipped and an automatic progress report can help the director judge how they're doing time-wise in session. Providing a script with hyperlinks also allows the director to trigger recorded feeder lines for the actor in the booth, creating a more natural flow to the dialogue.

FIRST PASS THE POST

Of course, all these scripts create a lot of files to be processed by post production. There needs to be a way to pass files from studio to post and back to the dev team in an efficient manner. For *The Old Republic*, the original script format arrived actor-friendly, but we created tools to compile recorded scripts and put them into a single one that was formatted for post, thus avoiding the editors having to chase down many individual scripts.

Along with the monster scripts come massive character lists; *The Old Republic* had over 50 British actors on board (out of a total cast of 200), *Witcher 2* had over 40 and with *Fable III* we had 80 actors including Sir Ben Kingsley, John Cleese and Michael Fassbender. While some of this talent may provide a singular key figure in the story, many of the actors will voice numerous characters. And with recordings taking place over months or even years, it's important we help the actors get back into the right voice each time they come in for a session. Always have files of the previous recording on hand for the actor to listen to and find the match before you get going.

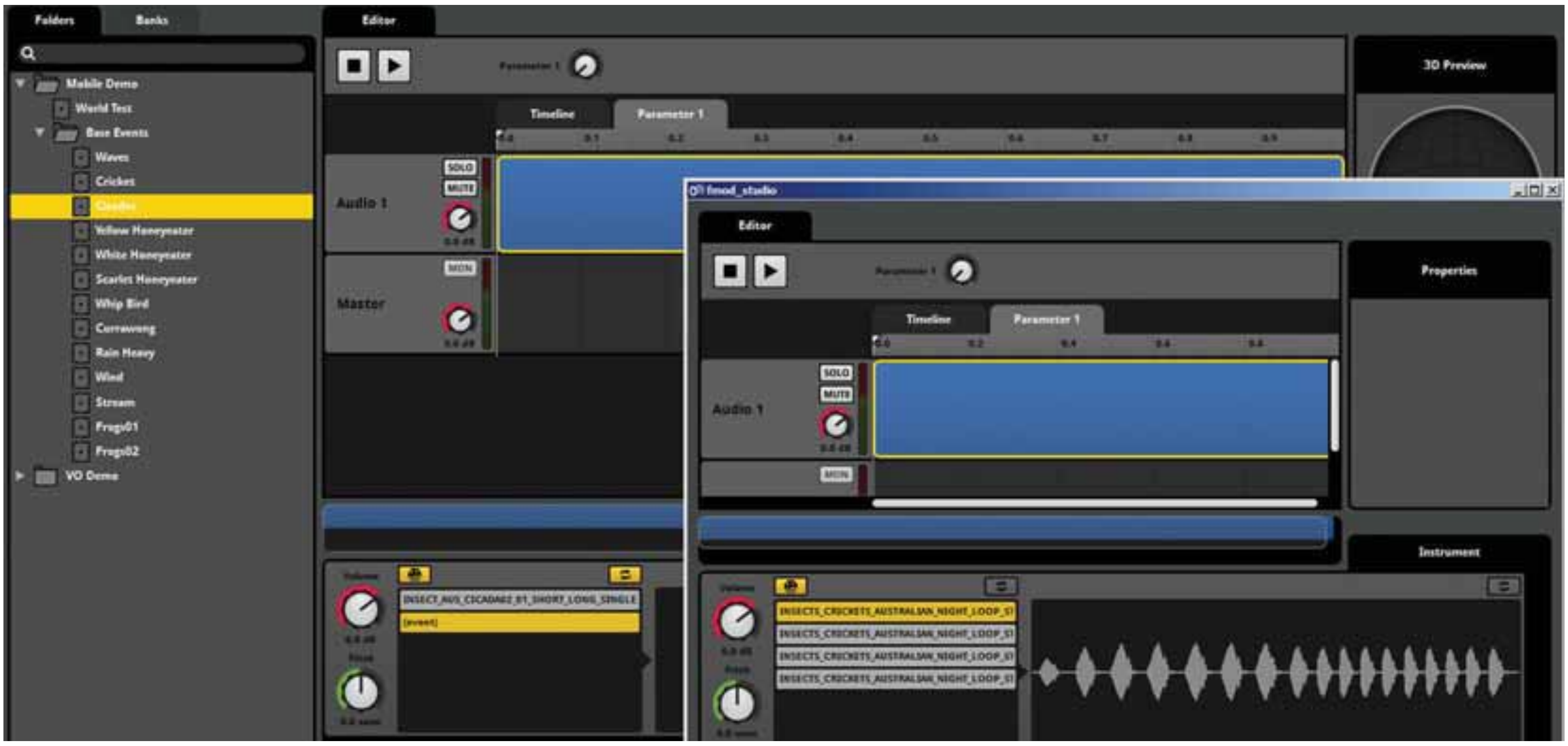
These well-managed monsters aren't going unnoticed. *Witcher 2* has won over 60 awards globally and *The Old Republic* holds the 2012 Guinness World Record for most voice acting in an entertainment project.

With good script preparation and tools you too can be ready to tackle the next beast on its way in.

www.side.com

The generation game

Sound library producer **Stephan Schütze**, who is also an expert on FMOD's tools, looks at the potential that contemporary generative audio methodologies offer video games designers



GENERATIVE AUDIO REMAINS as powerful an option now as it was ten years ago when I first applied it to a PlayStation 2 game.

Its many benefits include reduction or removal of repetitive sound effects, more efficient use of memory, and if done properly, a better sounding audio environment. Generative audio continues to evolve as a process with the availability of new tools.

One of the most exciting upcoming tools is FMOD Studio, and I have been fortunate enough to get access to an early copy of the software to discover a little of how this technique is developing.

Generative audio is the process of using small audio building blocks to create sound effects in real time. Essentially you take the smaller elements used to create a sound such as an explosion, and enter those elements directly into memory.

When the explosion sound is triggered, it is assembled in real time. Usually, this process utilises a series of sound-files that offer variable components, increasing the variety of the generated sound.

INFINITE POTENTAL

The beauty of this method is that once a sound file is in memory it can be reused infinitely. The sound of a shotgun is used for its obvious purpose, but then pitched down to simulate a grenade, or pitched and combined with other sounds to create an explosion or collision impact sound.

In FMOD Designer, for birds in a tree I would utilise a series of short bird calls and trigger them with defined delays, pitch randomisation and suitable polyphony. This was effective, but still required a reasonable number of short birdcall sound files, adding to memory. FMOD Studio's new functionality allows for even smaller initial components. Many creature vocalisations are the product of a series of similar tonal sound elements; it is possible to generate a reasonable likeness of a bird or animal call from the smallest component of the vocalisation.

> **“*The evolution of game sound and generative audio will be directly influenced by how far we want to take it.*”**
>
> Stephan Schütze, Producer

A group of insects in an environment is much like a group of people, with a constant level of conversation between those in the area. With the current generation of tools we can isolate a single insect 'sentence' and use the generative audio functionality to simulate a group of insects in a region. We could possibly even break it down to a single 'phrase' of an insect to create the effect of a larger group.

Two elements within FMOD Studio take things further. An Event can contain both a Timeline Track and/or a series of Parameter Tracks. This means Events can have a more complex interaction of associated sound files. The second element is that Events can be nested within other Events and controlled both up and down the nesting hierarchy. They can also be controlled by Events outside of the nesting chain. The possibilities these functions provide allows you to not just utilise an insect call down to the 'word' level, but further still to a 'syllable' level.

FMOD Studio is still in development, but it appears generative audio is about to take a large evolutionary leap.

GENERATIVE AUDIO ON THE MOVE

I am reasonably confident that the full version of FMOD Studio will allow me to create the environmental audio of a massive game world such as a *Skyrim* or a *Borderlands*, using the smallest sound elements and the generative audio process to build a dynamic and repetition free audio environment small enough to work on a mobile device.

This will be a tremendous benefit for the rapid growth of development of triple-A projects on mobile platforms, as well as an incredible improvement of efficiency for larger console audio, supporting the creation of more engaging audio environments.

For me, video games audio has already surpassed many other media formats in its production complexity, as well as in its potential for excellence.

Generative audio is an element of game production that will become more and more the norm as we strive to create striking audio environments for our players.

The promise that new tools such as FMOD Studio are offering has me excited, as I honestly have no idea what I will be capable of creating in the next 12 months.

The evolution of game sound and generative audio will be directly influenced by how far we want to take it.

www.fmod.org

Early access to FMOD Studio (main image) has convinced Stephan Schütze (above) that generative audio is about to take something of an 'evolutionary leap'

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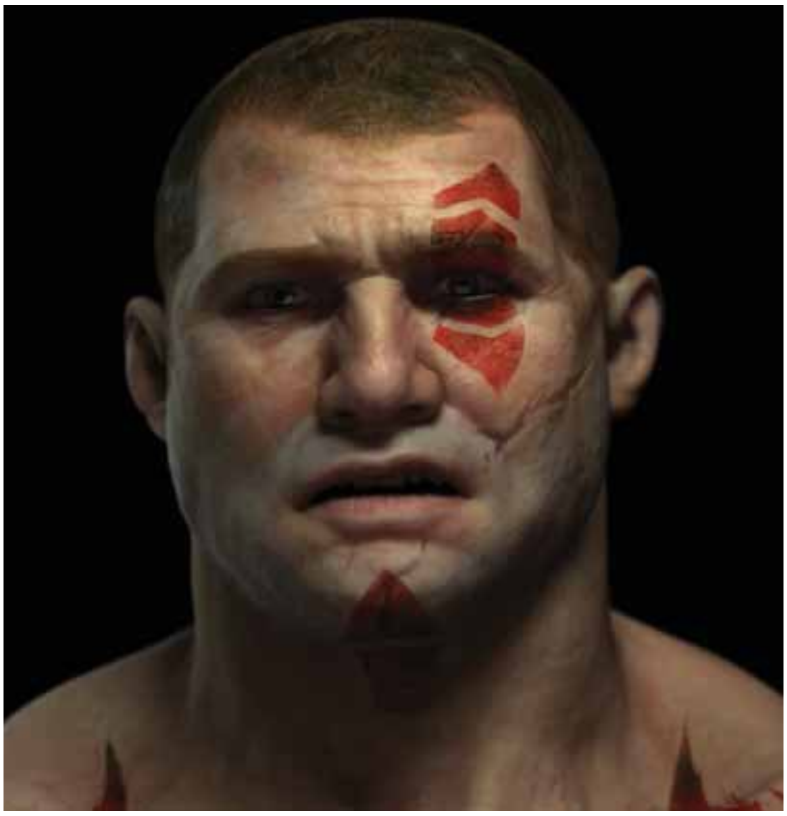
Expressions in sound

Can great facial animation really be created via a simple extension to the VO recording process? Audio experts Wave and animation outfit Cubic Motion think so, and they've created an impressive tech demo to make their case



FULL PERFORMANCE CAPTURE is an elaborate process. It is costly, complex, and consumes time with abandon. The margin for error can feel wider than the uncanny valley, and the variables to consider are dizzying.

While the practice absolutely serves a purpose, for those looking for great facial animation synched with actors' delivery of vocal material, there are alternatives. That's according to audio powerhouse Wave, and animation service provider Cubic Motion.

The two recently collaborated – along with CG character specialist 3Lateral – on making an ambitious tech demo to showcase what can be done with a low impact extension to the established VO recording process and a little bit of teamwork.

STRENGTH OF CHARACTER

The '*Athanasius*' demo showcases the speech and facial expressions of an imposing fictional virtual character, which began life in a recording booth. The actor behind the performance delivered his lines in the normal VO context; albeit wearing a lightweight head mounted camera system.

With the audio recording and visual performance captured in unison, Cubic Motion was in a position to analyse the video for data that could be solved onto a 3D character. Then, with some aural refinement by Wave and a little tweaking using Cubic Motion's bank of existing animation data, the final demo was ready.

The quality of the final result arguably rivals the output of far more expensive techniques, and all with minimal disruption to the typical VO recording process, insist those involved.

"For us the process in the actual booth was seamless, and created very little extra work," says Wave's head of game audio Anthony Matchett. "And at the end of the session, we could easily deliver the audio straight back to the guys from Cubic. As soon as we had a locked time in the audio, they came back to us for us to do a light amount of sound design just so the audio really matched the video.

"But from a client's point of view, this whole thing will be really easy for them, and it works really well. It's honestly very non-disruptive. Setting up the VO booth for the video capture was very simple, and took very little time."

> **"To get the right animation means picking the right audio partner that will understand the approch, and help with that process."**
>
> Simon Elms, Cubic Motion

MANY HANDS

And the secret to getting the process of extracting high quality facial animation data from a VO session just right? It's all about carefully selected collaborative partners and an open-mindedness to cooperation.

"As facial animators we want to create the highest quality work possible, and a number of factors contribute to that when you're working with another company," says Steven Caulkin, head of research at Cubic Motion. "Obviously you need to get the basics right; stuff like a seamless pipeline suited to the project, the synchronisation of data needs to be nicely handled, and you need to get somebody that will work well with you on that front and be accommodating."

More important, though, adds Caulkin, is finding a partner that appreciates the elements of the process that are vital to your own company's needs; the likes of setting up the capture equipment in the audio booth, and being given a chance to test the equipment well in advance.

"Being able to work together like that means we get better data and a better final animation," insists Caulkin.

Cubic Motion's biz dev director Simon Elms is quick to elaborate: "To get the right animation means picking the right audio partner that will understand the approach, and help with that process. Wave have been great for us in that regard."

Wave and Cubic Motion's purpose is clear; they want to prove the value of extending the voice over recording process to embrace facial animation data generation.

There is an opinion prevalent in some sectors of the games industry that processes not dissimilar to the one used for the *Athanasius* demo means making creative and technical sacrifices.

Take a look at the demo yourself, and you'll see that such an assumption is far from correct.
www.wavestudios.com

The Athanasius demo (top left) and the VO process (top right). Above, top-to-bottom: Wave's Anthony Matchett, and Simon Elms and Steven Caulkin of Cubic Motion

All for one

The audio library created by Soundrangers can give a single developer a huge bank of material. But can such a resource enable true creativity? The team behind the collection of sounds and ambients think so

Soundrangers' co-founder Barry Dowsett says its sound library (right) can act both as a cost-effect solution for indies, or as base for further audio development on console

A SOUND LIBRARY offered by the likes of Soundrangers provides creatives with an expansive collection of individual effects and ambients, and in an ever diversifying games industry, it's an increasingly popular option.

But many sound libraries are general purpose entities aimed in equal measure at film and TV, with games only of passing interest to their curators.

Meanwhile, while Soundrangers' collection is suitable for the likes of cinematic audio, a wealth of its content is aimed specifically at video games development.

"The whole idea of creating our library started because we could not find material that we could use in games development in other standard issue libraries," explains Soundrangers co-founder and sound designer Barry Dowsett of establishing the library. "In a gaming environment you usually have ambiences, and the ambiences need to be level for that environment. And there's a lot of what we call 'one-shot' sound effects, so maybe if you shotgun blast, you don't want to hear that one sound over and over again; you want maybe six or seven of them."

LOUD PLEASE!

Available to high-volume users in its entirety on a hard drive, or online via the Soundrangers store for those looking to purchase audio files individually, a huge chunk of what the company provides is designed and recorded so as to allow game-applicable looping and editing.

It all sounds very appealing, but don't pre-recorded sounds, however tailored for games, only serve to stifle the creativity of the end-user, offering them canned content rather than a blank canvas and box of paints?

"There's two ways sound libraries can work for developers," Dowsett replies. "There's a crowd of people who will use pre-made sounds because they don't have an internal sound department and their budgets aren't large. But there's also a crowd of professional game audio sound designers who also use our libraries as source material for whatever projects they're working on.

"So while we are making all the specifications for our sounds, we do it for the games developers, and there's substantial amounts of stuff in our in our libraries that can also be used as a base or content for making other sounds.

"For instance, you could take gunshots and thunder claps and explosions, and a sound designer could combine all those together to make their own unique sound. But an indie developer with perhaps limited resources can usually quickly find suitable sounds to put in their game."

Indeed, every element of Soundrangers' work, which also includes doing high volumes of custom audio work, is carried out with it in mind that developers may want to create their own custom loops from the material, or play with the audio in other ways.

SOUND RANGERS
SOUNDRANGERS
Sound Effects
Super Mega SoundPack Vol.1

> ***While we are making all the specifications for our sounds, we do it for the developers and there's substantial amounts of stuff.***
>
> Barry Dowsett, Soundrangers

BIG SOUNDS FOR SMALL PLATFORMS

Soundrangers material is also conformed so as to make the library's content suitable to every kind of project from mobile to triple-A.

"We try and conform stuff like the ambient recording in different ways," explains Dowsett. "We have social and mobile people with a lot of memory and bandwidth issues they have to deal with, that mean they can't take on a big chunk of audio without it really wrecking their footprint, because they have to really leave room for art and animations and all that other stuff.

"So we have to offer really small file sizes, so an ambient might be a four or five second loop rather than one that's much longer for the typical console crowd. We pay attention to how our sounds will work in both contexts, and that's really important and specific to games development."

Clearly, then, sound libraries can offer freedom, flexibility and a foundation for creativity, as Soundrangers are proving. So next time you consider where you might source those extra gunshots, or want an ambient of a trickling stream, consider joining a library. It might be just what your game's audio needs.

www.soundrangers.com

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Setting standards

Standardisation in games audio is essential. PitStop's production director **Nadeem Daya** argues that giving sound producers clear guidelines is now more important than ever

WHEN DEALING WITH audio in games, one area that's often overlooked is the technical side of creation and recording.

Editing and post-processing large scale voice over and localisation projects, as well as creating and implementing sound effects and music files, has made us realise how important setting out defined audio thresholds, over and above file type, sample rate and bit-depth specifications, has become.

With simultaneous recordings often taking place across our seven production facilities, as well as in other studios when necessary, we've found it essential to introduce specific guidelines for all of our audio creation producers to adhere to. The benefits of this are many – efficiency, quality, reduced post-production times and a smoother audio pipeline – to name a few. When setting out these guidelines, it's important to think about the whole technical process from pre-production to final delivery.

WIRED FOR SOUND

At PitStop, we provide all of our studios with standard recording technical specification sheets, and these cover areas which include minimum and maximum audio capture levels, guidelines on mic placement, recording technique and compression, as well as a checklist covering foldback monitoring, talkback and mic and pre-amp checks.

Further measures can be put in place depending on where and when the recording is happening. If the session is not happening at one of our own studios, a full and thorough check of the facility is undertaken which includes speaking to the studio engineer, making sure they have suitable equipment, visiting the studio or seeing pictures of the space and asking to hear test recordings from the studio in order to suggest any improvements to the captured sound in advance of the session. You'll find that most studios are more than willing to accommodate, as most engineers take great pride in the sound that can be achieved, and never like to be seen to be unable to provide anything but the highest quality.

> ***The aim of a standard practice is to allow the creativity and interpretation of the voice director and actor to be fully realised.***
>
> Nadeem Daya, PitStop

During the recording itself, the aim of a standard practice is to allow the creativity and interpretation of the voice director and actor to be aided and fully realised. This means the engineer, having undertaken the preparation work, then has to be diligent in aiding the voice director in achieving the sound needed for the material. This includes being able to suggest recording techniques to further enhance specific material – whispers for example – all the while adhering to a quality and standard recording practice.

By controlling the parameters we can control, and removing the variances from non-creative elements, we've found that our voice directors and actors feel much more comfortable knowing they're in a fully controlled environment where their performance and ideas will be enhanced.

CLEAR ADVANTAGES

Post-production is the area where the benefits of standardised audio practice become most obvious. Handling projects containing many tens of thousands of files which all need to be edited and post-processed to sound consistent gives the largest opportunity for a standard practice to be implemented.

We have a very specific way of post-processing and editing files which is fully documented and can be taught across a two-day training period. All of our editors go through this training process. By limiting as many technical variables during the recordings as we can, our editors know exactly what to expect. And by having a standard post-production technique, know exactly how to treat the files to ensure a quick and accurate turnaround of high quality audio which is ready to be implemented into the game.

It can be seen that by fully embracing standardised practices over all of the technical aspects of audio creation, the quality and efficiency of recorded and created audio can be increased, whilst the creative side can be aided due to increased confidence levels.

We believe that handling the audio production process in this way gives the best results. Drawing from this, we are now looking at ways of creating a similar pipeline to ensure pristine audio capture during full body and facial motion capture sessions where production costs are even higher and the need for a standardised practice is even greater.

www.pitstopproductions.co.uk

PitStop's Nadeem Daya (above) says actors feel much more comfortable in a fully controlled environment (top) where variances from non-creative elements are removed

Wwise words

Freelance audio director and former BioWare sound man **Simon Pressey** explores what Wwise brought to the Mass Effect universe, and ponders the changing status of the games composer

Speaking to the audio talent behind the Mass Effect games (main images), freelance audio director Simon Pressey is confident games composers now have a new power

THE AUDIOKINETIC INTERACTIVE Music System in Wwise has started a major mutation of how game music is developed, empowering the composer greatly.

As audio director at BioWare I led the adoption of Wwise for the continuation of the *Mass Effect* series.

Jack Wall, lead composer, set about designing how his musical vision would be represented. Joined by Brian DiDomenico, they implemented music and delivered Wwise Workgroup packages for integration directly in the game.

They both spoke to me about how Wwise empowered the music composition process on *Mass Effect.*

WORDS OF THE WWISE

"I loved using Wwise on *Mass Effect 2,*" explains Wall. "After the first game, knowing how my music would playback became a focus as a way to improve on the first score. A 16-year veteran writing music for games, my biggest pet peeve is bad musical transitions. Using Wwise was an amazing revelation and improvement on every musical transition in the game.

"I have new respect for every audio director, because what I didn't count on is, that it's an enormously time-consuming job to integrate music into such a large-format game. However, Wwise, gets the results as quickly as is currently possible. On balance it was worth every extra minute of time to get the implementation to work the way I intended.

"An interesting caveat about being a composer working with Wwise; it gives you so much control, it is easy to leave the other stakeholders out of the process, however unintentionally. I've revised my process over time to include everyone first in the compositional revision process before getting into Wwise. That way, everyone is first pleased with the music, then blown away when it's finally in the game."

> ***"My biggest pet peeve is bad musical transitions. Using Wwise was an amazing revelation and improvement on every musical transition in the game."***
>
> Jack Wall, Composer

TALKING MASS EFFECT

"For a complex game like *Mass Effect 2*, with branching cinematics and conversation trees, Wwise was a dream tool for music implementation," adds DiDomenico. "The major benefit was 'control'. The music structure for *Mass Effect 2* was comprised of a three layered combat system, exploration, conversation and cinematic cues.

"We needed to transition seamlessly between cues so each level would contain 30-to-60 music transitions. That's a lot, especially when you have to verify all possibilities to ensure they sound smooth. That control of how each cue transitioned was a massive advantage, making the final score sound polished and fluid, achieving our goal of seamless immersion in the experience, that was never interrupted by an abrupt, meaningless music transition. Once I started importing stems into Wwise, the interactive music hierarchy became very intuitive; setting up a level in Wwise was simple and fast. The hierarchy allowed us to affect changes across multiple areas of the game and those global settings saved time. In addition, being able to drag and drop over 700 music assets, copying transitions, and an easy to navigate hierarchy, were paramount in completing such a game.

"I believe the music implementation was a success, because we embraced the subtleties of scoring for games. We avoided the 'light switch' combat music system that turns on and off when the bad guys die, keeping the music tense in between battles. We 'Frankenstein' a myriad of cues to serve the hundreds of cinematic and conversation scenes that the budget would not allow for. We avoided fading cues when the action ended and instead utilised musical transitions and stingers to segue between cues, creating custom crossfades for each cue transition to ensure the listener would remain immersed as the story evolved.

"As an integrator I also recommend learning as much as you can about the possibilities of the scripting within your game engine and stay open to change and variation in how the music interacts. Wwise allows you that flexibility.

"Think of how you want your score to play out and then figure out how Wwise can get you there. Wwise is so flexible it seems everyone I speak to, from LucasArts, Ubisoft and Bioware to THQ, are using it differently, pushing the interactive music envelope.

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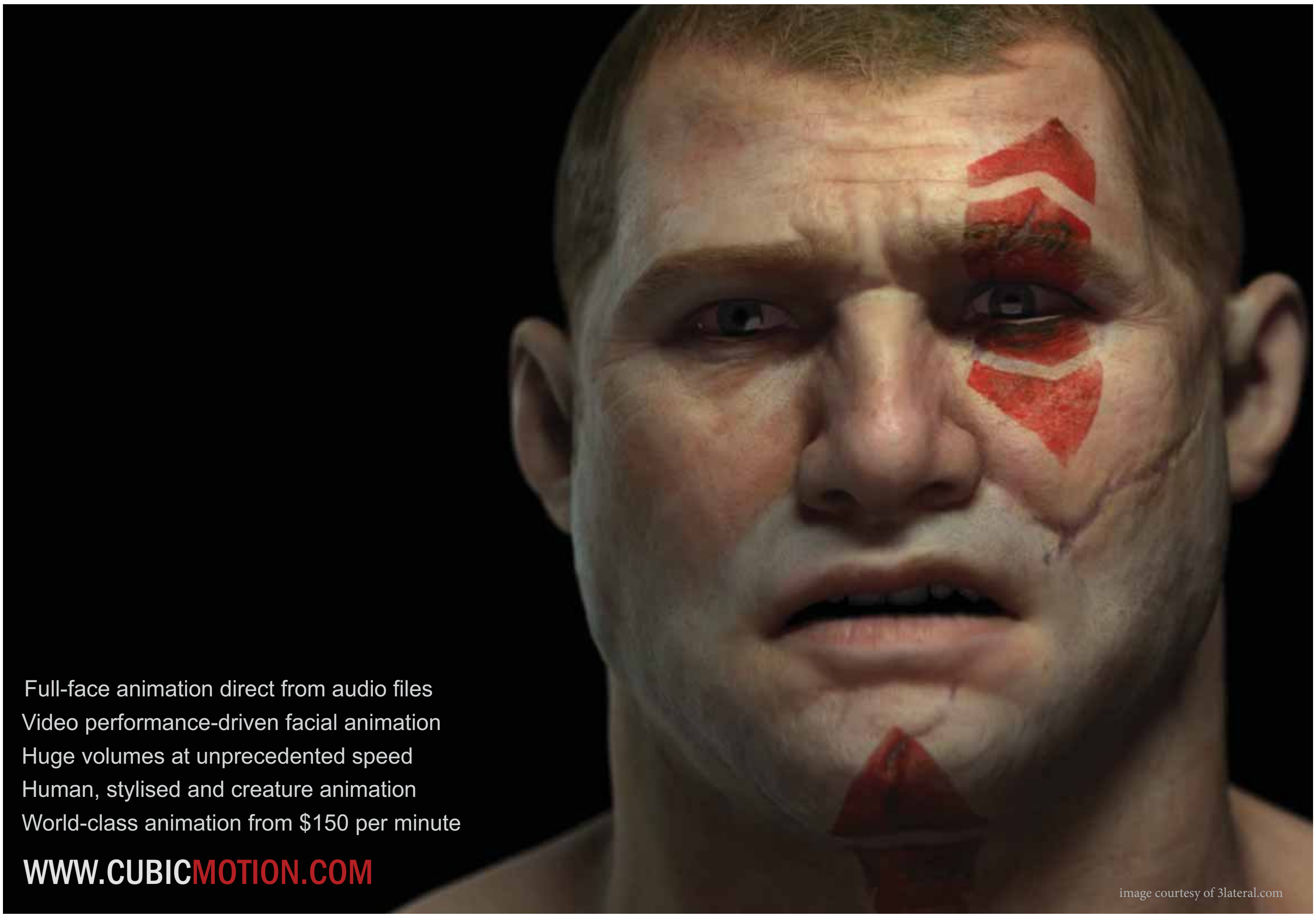

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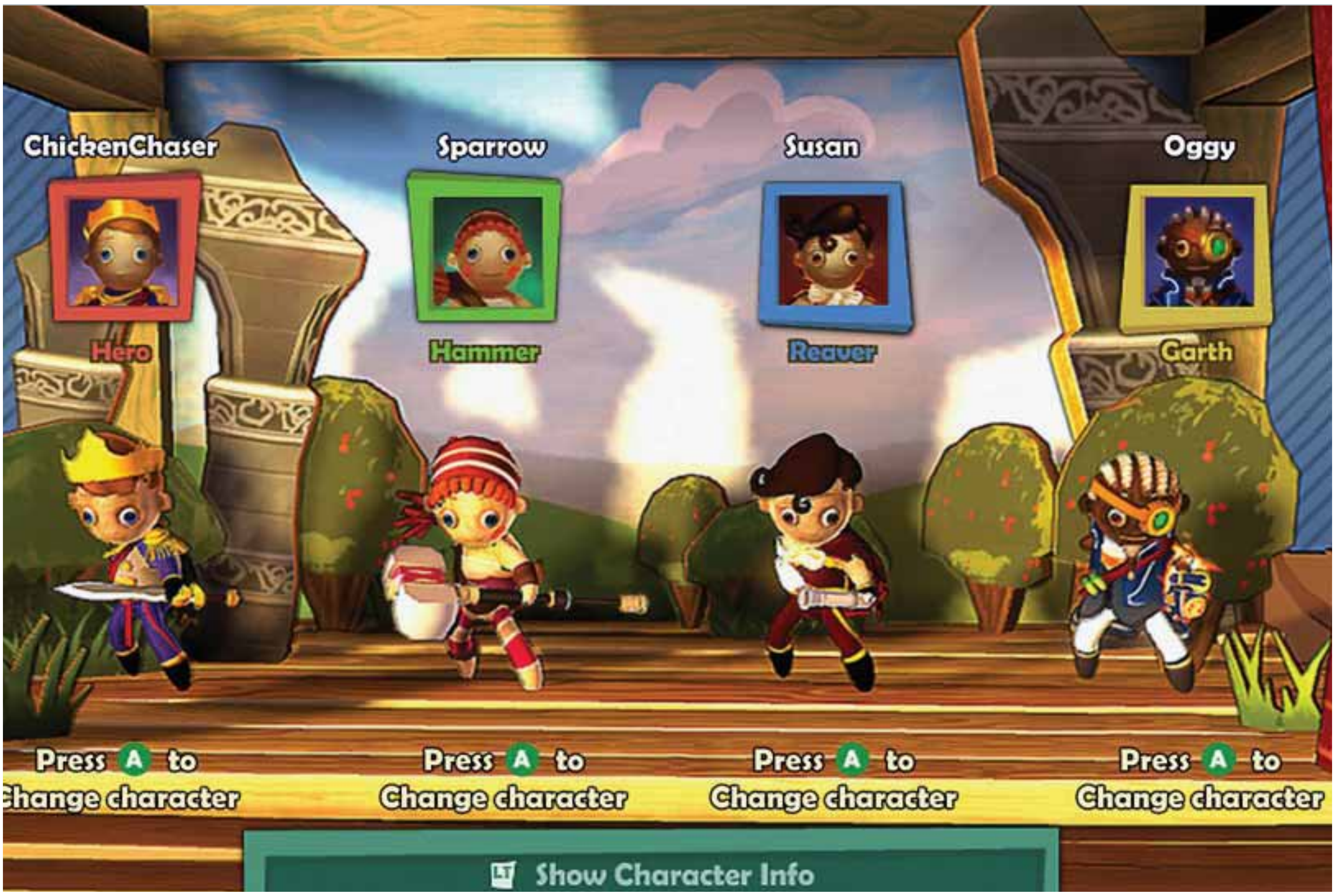
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Lionhead's new Hero

The next Fable game has nothing to do with its erstwhile creator Peter Molyneux. **Christopher Dring** speaks to Fable Heroes lead designer Ted Timmins about how he went from humble beginnings as a Lionhead games tester to creating his own fully fledged Microsoft-published adventure

Fable Heroes (top) came from the idea of 'Fable meets Gauntlet', which Ted Timmins (above) and his colleagues conceived during a Lionhead 'creative day'

TO MANY, PETER MOLYNEUX was Lionhead. The studio's founder was the creative visionary and voice behind its acclaimed output – from *Black and White* to *Fable*.

And so with him now gone it's easy to assume that the good ship Lionhead is without its rudder. And that a future of identikit *Fable* sequels awaits.

But Lionhead was never just Peter Molyneux. It was a team of talented individuals that he had helped nurture and develop over the years. And now with Molyneux on an entirely new project, it's up to these creative men and women to step forth.

Men and women such as *Fable Heroes* lead designer Ted Timmins.

FABLE: A JOURNEY

Timmins began life at Lionhead working on the first *Fable*. He had to choose between going to University or accepting a one month QA contract on the Xbox RPG, and he never looked back.

"I did one month testing with the first *Fable*, then I got a three month contract, and I realised I made the right decision," he says. "Three months went by. Then a year went by, and next thing I knew five years had gone by. And to get here today almost eight years later is pretty awesome. And that is always what is so great about Lionhead; they support your career. A lot of people who worked on *Fable Heroes* have never been in these kind of positions before."

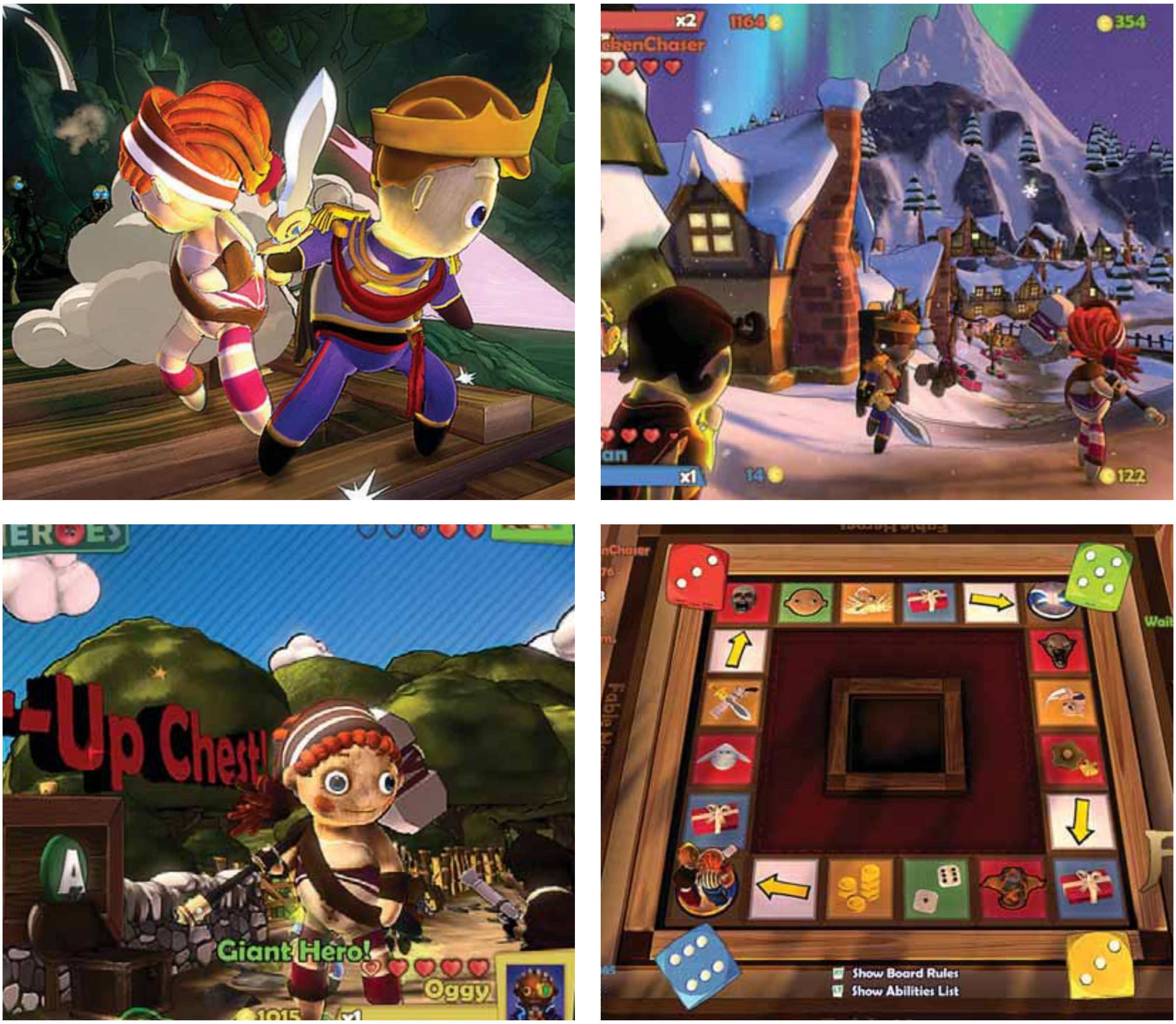
> ***"Heroes came out of the desire to make something different to complement to our main triple-A Fable games."***
>
> Ted Timmins, Lionhead

Timmins was talking at the first unveiling of *Fable Heroes* in San Francisco back in March – which was just days before Molyneux announced he was leaving – and he couldn't believe his luck.

Fable Heroes was an idea cooked up between him and Jon Eckersley for a Lionhead creative day in 2011. And now it's about to become a fully-published, realised Xbox Live Arcade title.

"We were wondering what we could do for this creative day," explains Timmins. "We were tossing a few ideas back and forth before John just said: 'What if *Fable* met *Gauntlet*?'. And I was like, awesome, that would be amazing. So we started off doing a design around a four-player *Fable*. We grabbed four other people, Don, an engine guy, Rob, an FX guy, Alex, a programmer, and Matt Green, who is a level designer.

"The six of us got together, went into a boardroom, and we just started writing on the wall. We just started brainstorming. Then we spent a couple of weeks of working late nights and weekends, and we showed Louise [head of the *Fable* franchise], and she was like: 'Wow, this is awesome.' Then she grabbed Peter Molyneux, brought him in, and he also



Compared to the main Fable canon, Heroes is a visually distinct game

thought it was amazing. They then said: 'We need to have a think about this. We weren't expecting this'. So they went away, and a couple of days later they came back and green lit the project.

"This has never happened before at Lionhead, it is something new. And although we have had other creative days, we have never had a video game come from it. So there is a lot of pressure on us. It is my first time as a lead designer. There's a lot of people in roles for the first time. It is great that Lionhead has been so supportive."

A NEW HERO EMERGES

Fable Heroes is not your typical *Fable* RPG. It's a four-player hack-and-slash adventure, featuring puppets as the main stars. It also boasts a cartoon visual style and, with *Fable's* usual adult themes toned down, it is even appropriate for kids.

But this is still very much the series fans have come to love. The puppets are all modelled on popular characters, the levels are all cartoon representations of iconic *Fable* locations, and the title will even hook up with this year's boxed release – *Fable: The Journey*.

And like any good *Fable*, there's a tonne of innovative little flourishes locked inside the title to discover. From the extremely testing Dark World, to a special 'cloud' zone, which can only be unlocked when the world's leading *Fable Heroes* players manage to rack up enough coins.

"Heroes came out of the desire to make something different to complement to our main triple-A *Fable* games," says Timmins. "I have no doubt in my mind that anyone that has loved *Fable* over the years is going to enjoy playing this."

Fable Heroes was shown for the first time – in a near-complete state – at Microsoft's Spring Showcase. And despite the industry's inability to keep secrets, the game came as a revelation to practically everybody in the packed room.

"I am surprised it didn't leak out before we showed it," adds Timmins. "I was really paranoid. We got these T-shirts made and I was like 'the t-shirt guys, have they signed an NDA?'. We've had work experience people come in, and a whole team of GAME employees. It's amazing we've kept it a secret.

"It was great watching people walk in at the Microsoft event, because they were walking past, and then they took a double take and walked back."

NEXT HERO

Timmins is a man who cannot believe his luck. He's risen from a temp games tester to the lead designer on his very own Microsoft-published video game.

And he promises not to forget his roots.

"Because I came from work experience, I will always spare time for when we have works exs in the office," he concludes.

"I remember what it was like: I was 18, I walked into Lionhead, and I was like 'Wow, they make video games here.' And to work on the original *Fable*, which is one of my all-time favourite games, was just incredible."

That wide-eyed desire to try something new and nurture new talent lives on at Lionhead.

Peter who?

Get that job

Preparing for a games industry interview and want to stay ahead of the pack? LucasArts production supervisor **Jason Smith** is here with essential advice for those about to meet a potential employer

When at the interview (such as above), LucasArts' Jason Smith says it is important to show potential employers your passion for the job and share with them your life experiences

THIS MAY HAVE been one my most enjoyable years in the industry, largely due to having had the opportunity to speak at nine different schools specialising in preparing graduates for various artistic jobs in games.

This is hugely important to me. I feel energised and inspired after spending time with the future of the industry and I wish I had the opportunity of some honest insight before starting on my own career.

This article summarises my key pointers for pre-interview preparation. I hope it's useful.

Keep your showreel focused

Choose only your best work, keep traditional portfolios to less than 16 pieces and showreels to less than three minutes. If you are completing a course which has provided you with a varied reel, consider each job a completely separate application (this will take longer, but you will be competing with other applicants who have come from specialised courses, often with deeper portfolios to offer).

Your best opportunity is to customise your reel and resumé to the specific discipline and role you're applying for – and ensure your passion for this field is apparent to employers. On top of this, you have the option to present your knowledge and skills in the related surrounding areas as a bonus, but keep this brief.

> **“Generic is bad; be specific, include the firm you are applying to in your goals and show you've done your homework.”**
>
> Jason Smith, LucasArts

Traditional art skills are important for any art role

Whatever you may have heard; all studios use pencils and pens for visual communication many, many times a day. If you want to model or rig characters, understanding anatomy either through drawing or sculpture is a huge positive for anyone reviewing your portfolio.

If your training doesn't include life drawing find some local classes. If you are interested in environment modelling, consider supporting your portfolio with your own inspirational photographic lighting studies (these areas are interwoven very deeply in games development). Traditional skills are the foundation of what we do; draw on as much reference as possible before starting to work in CG and be confident in presenting your background research and goals.

Don't be afraid to be honest

One of the most noticeable portfolios I've seen recently included a short dissection under each visual where on a number of pieces the author was critiquing their own work. It's a great approach but needs to be balanced. Be careful not to come across negatively – it's important to make the reviewer feel good about what they're seeing and not to come across like you're making excuses. Talk about what you've learned, and if need be, where specifically it could be improved, and how you would approach this next time you work on something similar. Presented correctly this can be very powerful, it shows you have a critical eye, can assess your own work and are striving to improve.

Presentation is everything

There is a good chance your showreel represents years of effort and has a goal to

Jason Smith has worked at numerous games developers such as Criterion, where he contributed to Burnout Paradise, Electronic Arts and Bullfrog, and says it's crucial for job seekers to build up an industry network of contacts

set up your career for years to come. Unfortunately visuals are often reduced to their lowest common denominator; if you hack together a low quality, badly edited reel with no explanation or thought for the work it will devalue the content.

Don't worry about coding your own website in HTML when you could use a better looking template (unless you're looking for an HTML job), and don't hesitate to ask an editor to help with your reel (unless you're applying to be an editor). There's a difference to being dishonest and being resourceful; presentation is important.

Tell us about you
I recently had a student compare interviewing with dating, and it was a good simile. Consider embedding your reel into a blog, it gives you a huge opportunity to sell yourself in addition to what's on your reel. Rather than looking at adverts surrounding a YouTube reel your interviewer could be eyeing your blog articles on recent conventions attended, technical papers read, galleries visited, photographs taken and games critiqued.

It's an opportunity to share your life experiences, and importantly, passion for what you want to do. Getting a job is like dating, it's all about connecting with someone; job-relevant interests that connect with a potential interviewer in support of a strong reel will give you a boost.

Resumé space is invaluable
I've noticed there is a secret rule in the US that resumés can only be a single page. Whether you stick to this guideline or not, using your resumé real estate wisely is crucial. Compare yours to others; does it stand out? Is there information irrelevant to the job you are applying for? Is there information missing that would help show your passion for what you want to do? All recruiters and portfolio reviewers see many resumés.

Generic is bad; be specific, include the company you are applying to in your career goals; make them feel special and show you've done your homework. Always ensure there is a clear URL to your blog and folio online as this is often one of the first things we look for.

Follow the industry
Arm yourself with an understanding of where the industry is headed. For example, trends in development processes, console cycles, hardware capabilities and key game releases. This gives you inside information for selecting companies to begin with, and then great ammunition for thought-provoking and informed conversation before and during an interview.

Know your company
Before your interview do your homework – it will become apparent very quickly and have a positive impact; everything you need is online. Know the key milestones in the company's history, what their most successful titles have been, which products make them money, who their competition is and whether they are the leader or a follower within the genre. Play their games and have an opinion, especially in your discipline.

Be flexible, buy a suitcase
You've spent years honing your craft and you're wanting to enter a specialist industry. It's unlikely there are a plethora of hiring games studios within a few blocks. Additionally the games industry changes over time globally. The bottom line is, if you want to spend a career in a job you love you may need to be open to some geographic flexibility. The good news is the games industry usually hires full-time (on-going contracts) rather than per-project (which is the film and visualFX industry preference) meaning you may not be required to pack your suitcase again for many years.

It's a small industry; really small
Don't piss people off, and if you think you have, make amends. You'll see the exact same recruiters and developers year after year at GDC, Siggraph, MIGS, E3, etcetera. It's a recruiter's job never to forget a face; and burning bridges is a sure-fire way of crippling your career before you've started. Even once you've landed your first job stay in contact with recruiters and your contacts in the other studios, as it's almost guaranteed you'll cross paths again. Make friends and keep them – next week they may be your boss.

LinkedIn is your friend
I'm not alone in being much more open to unsolicited connections on LinkedIn than I am on Facebook. The latter is personal; the former is business. Ensure your LinkedIn page represents your professional side. Use this site, track your visitors and follow-up when someone of interest has been looking at your profile; it's an amazing tool for introductions, and by far the best way to build and manage an industry network.

GDC and Siggraph are where it's at
Both shows have volunteers programs and from my experience at Siggraph, many program chairs started as student volunteers. These opportunities not only make it affordable to experience the show and its content; they are an incredible way of meeting influential people in the business and building your network. If you get – or can make – the opportunity, attending these conferences should be high on your to-do list.

Hassle, politely
There's a fine line between being persistent and being annoying; provided you stay on the right side of this you're in a good place. Ask for comments on areas of improvement. Pre-empting that your work may not yet be perfect makes you accessible and genuine. Checking back when you've updated your work is good. Stay relevant and ensure recruiters know you're looking – it's as much about timing as it is about skill set.

In 18 years in games development **Jason Smith** has worked for a number of iconic UK studios including Argonaut Software, Bullfrog, EA and Criterion Games. After a fortuitous road-trip led to the San Francisco-based Lucasfilm HQ, he couldn't resist the opportunity to join the force. By day, Jason is a production supervisor at LucasArts; by night, he is the director of real-time graphics at Siggraph. Follow @jasonrmsmith for industry related musings (and more importantly, tickets to Lucasfilm parties) – and read past and future ramblings at **jasonrmsmith.com**

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Five Industry Pitfalls for 2013
Mark Gerhard, Jagex Games Studio

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Colin Macdonald, Channel 4

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Richard Hackett, Blitz Games Studios

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Mark Baker, Mind Candy

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James Russell, The Creative Assembly

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Josh Atkins, Microsoft Soho Studios

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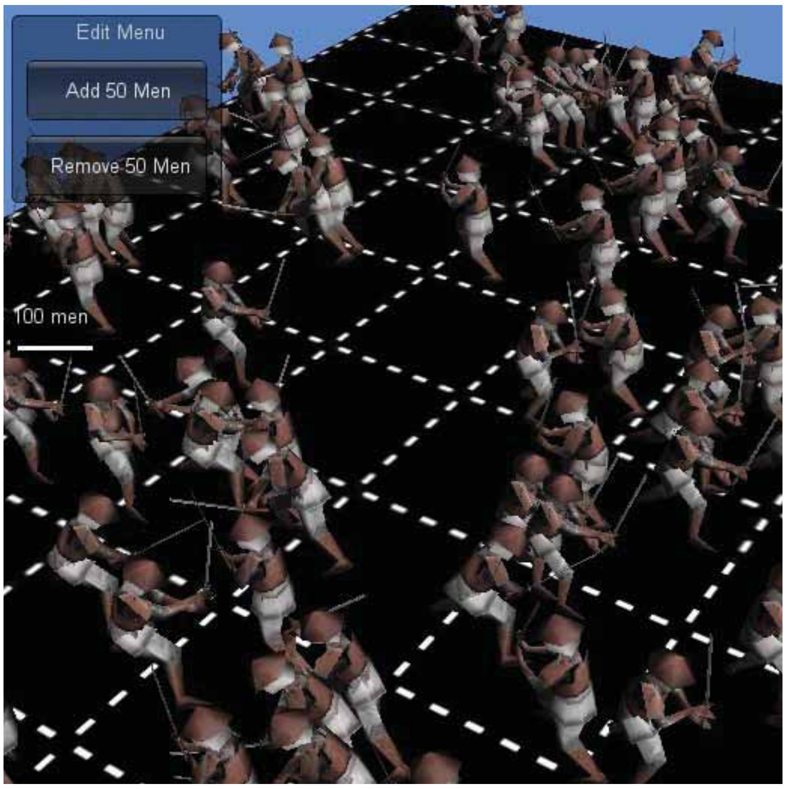
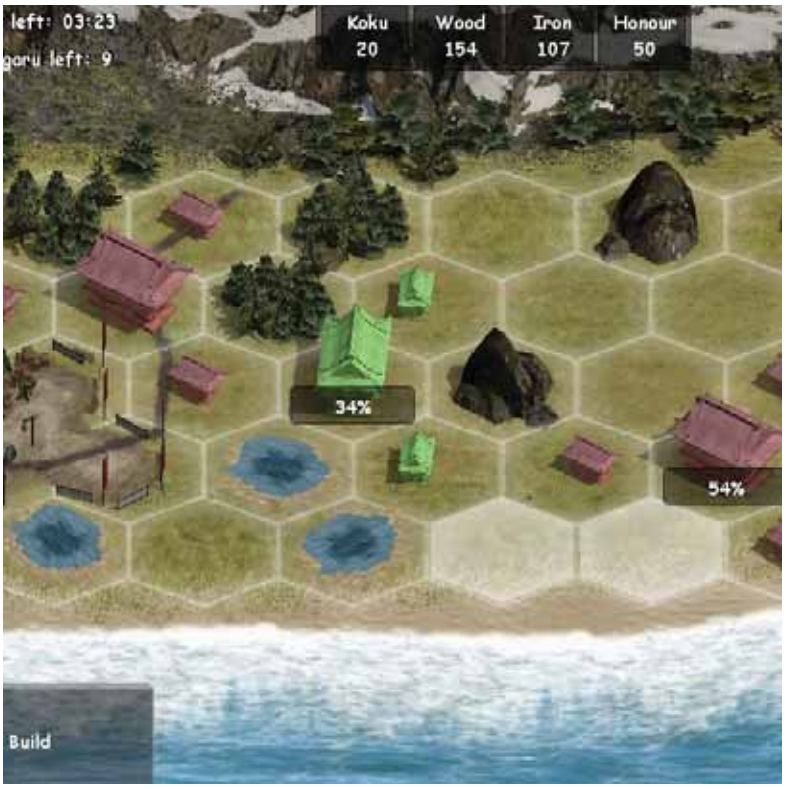
Mobilising armies

The Creative Assembly recently announced a newly formed mobile division, and an iOS reworking of the Total War concept. **Will Freeman** looks at the opportunity triple-A mobile offers long-standing PC and console studios





Renaud Charpentier, head of The Creative Assembly's mobile division

THINK OF IOS developers and it's easy to fill your head with clichés.

Easily romanticised concepts like bedroom coders, grass roots indies and microstudios have established themselves as the de facto stereotypes of the mobile gaming revolution, and they're proving enduring as truisms.

And yet a new breed of predator is circling the iOS market. Triple-A teams are zeroing in, armed with tools and techniques that once seemed impossibly distant from the mobile space. Just last month Epic president Mike Capps told *Develop* the million-dollar iOS dev budget was coming to stay.

Seeing the likes of EA producing casual content for the mobile space is nothing new, but since Epic's *Infinity Blade* debuted there's been a fresh wave of studios competing to dominate iOS with games more typical of high-end console and PC releases.

The latest established studio to debut on the Apple devices is Sega-owned outfit The Creative Assembly, which has moved its strategy series *Total War* to iOS. Long famed for its intricacy, the technically ambitious series is hardly the most obvious choice for the gently casual waters of the App Store.

Still, the decision makers at The Creative Assembly took the chance of establishing a dedicated mobile team, which ultimately resulted in the creation of the newly released *Total War Battles: Shogun*.

The mobile division started with just one man; Renaud Charpentier, project lead on The Creative Assembly's move on iOS.

"I was given the chance to work alone, which meant I was given the chance to work without the pressures of a huge team behind me," says Charpentier of the first move to bring *Total War* on mobile to life.

> ***"At some points I went back to my desk, and I'd think 'how can I possibly fit a cathedral in a cup of tea?'."***
>
> Renaud Charpentier, The Creative Assembly

"So we started doing research in a back and forth with Sega, and things looked very interesting. At the same time The Creative Assembly were also developing *Shogun 2*, so we decided to use the same background setting to make an iOS game."

FROM SMALL ACORNS

At that point Charpentier began to build a small team, mostly pulling in new staff from outside the company. The Unity engine was selected as the game's core tool, and a process of furious prototyping began.

"Making the game has really gone very well, technically speaking," confirms the project lead. "It is one of the smoothest developments I have ever seen. Within two weeks of starting to work on this game we were working with the high-end visuals."

That's not to say taking *Total War* to a new audience on a new platform was easy, even with the might of Sega and The Creative Assembly backing the development.

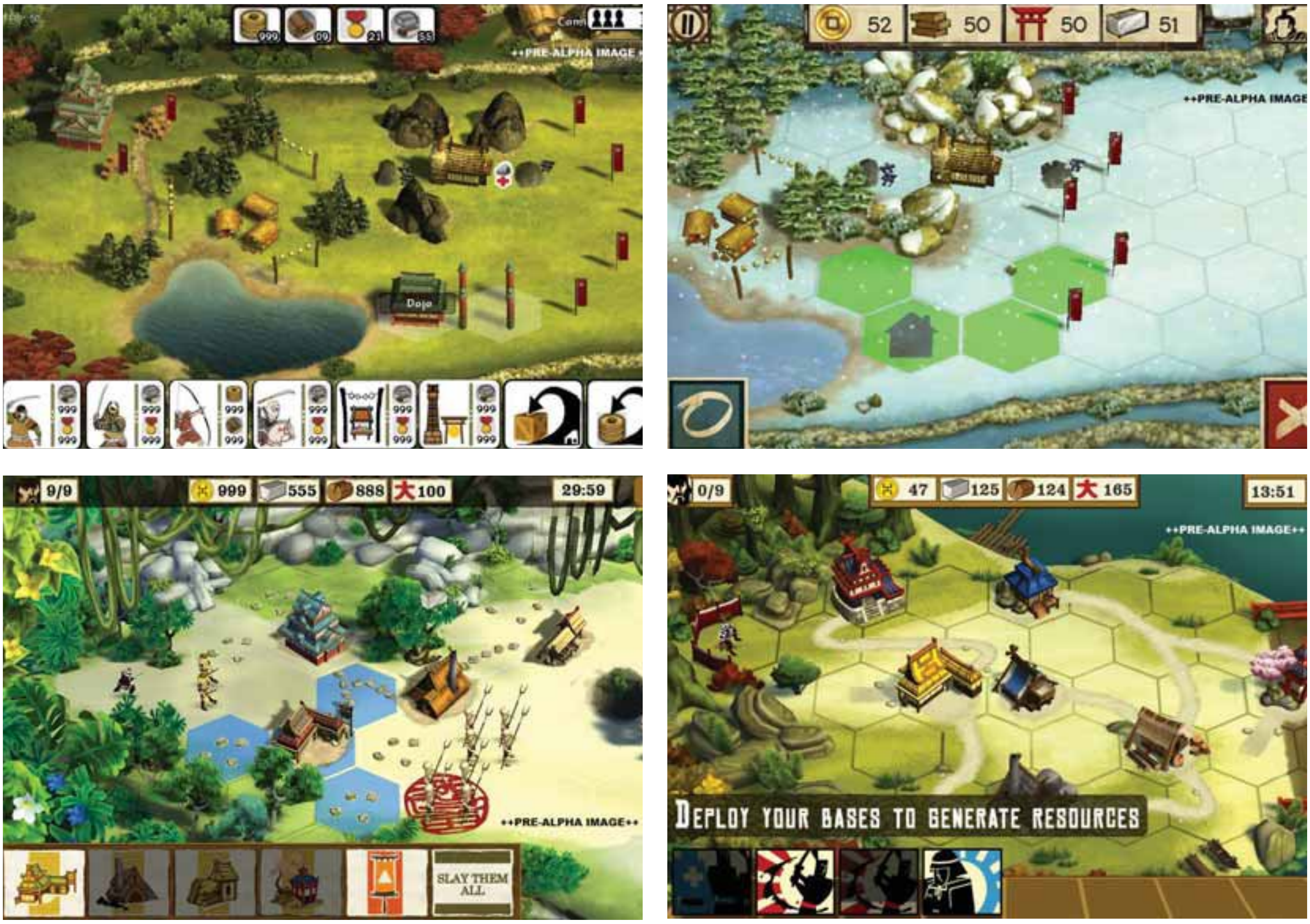
By Charpentier's own admission, reworking the DNA of *Total War* to fit the iOS was a 'monstrously' difficult task at times.

"At some points I went back to my desk with an iPhone in my hands, knowing exactly what *Total War* is, as I have worked on it for a long time, and I'd think 'how can I possibly fit a cathedral in a cup of tea?'. That was basically the challenge."

The solution to compressing the Church of *Total War* turned out to be a simple one. Concentrating on the core strengths of iOS, and deciding the minimal elements essential to *Total War* as an experience became an obsession for the team

"After that it was really about taking our existing high level design ideas and fitting them to that brief with the lower level design," elaborates Charpentier. "That was where we had to look at the game's economy and unit fighting and so on. And there Unity's strengths kicked in. It let us try things, even crudely, and then immediately beam that concept onto the target device an see if it worked. We had to iterate a lot"

With a small team and a popular engine in place The Creative Assembly had everything ready. But manpower and technology alone



The various prototype versions of Shogun's iOS outing (above) show how important iteration was to bringing an intricate PC series to mobile

do not making a game. Staff enthusiasm and attitude are equally important. And surely, at a high-end PC studio like The Creative Assembly, developers would be less than enthused by embracing mobile development?

While much of the team working on *Total War Battles* were hired in from elsewhere, some of the existing The Creative Assembly workforce joined the product. The reaction of those staff, and the wider team working on CA's console and PC projects, was one that highlighted a turning point in industry attitudes towards iOS.

"There is a change of attitude everywhere," he insists. "What I have seen is that developers, including myself, now see things like the iPad as a console. It is a console in terms of working with the device. I have worked on high-end PC games and console games, and from a working perspective now the game is finished, I can say it is a console.

"It is a fixed hardware so you know exactly what you have. In fact, unlike the PC's *Total War* is of course famous for, the iPad is more like a console, because you don't have adapt it to fit so very many cheaper or less powerful models. It was a lot like console development."

POSITIVE ATTITUDE

For the mobile team, the optimism doesn't stop at their feelings about the iOS hardware itself.

For Charpentier and his co-workers, the fast paced, dynamic nature of the mobile sector makes for a refreshing change to the world of triple-A console development.

"I feel personally that the main console business is a bit – I almost want to say stagnant," admits Charpentier. "There isn't enough change in that area, in part because of the console releases. Everything about those games and the way people develop them doesn't change for even ten years."

Over in the triple-A mobile space, things are very different. Hardware updates are so frequent the platforms are almost in a state of flux. Monetisation models adapt, and the gold rush keeps everyone motivated. For Charpentier, it is reminiscent of the console era when 3D arrived and gaming audiences exploded; a time of excitement and optimism.

As a result, he's clearly greatly inspired by a working atmosphere alien to many since the early 1990s.

"One thing that can get very tiring is working with monstrously big teams," he says. "If you are on a huge team, whoever you are, from designer to creative director, the bigger the team the more minimal is your personal impact on the game, and the more minimal are the things you can do and try. Another thing triple-A and big console teams have to fight is that of keeping inertia.

"On iOS it is going back to where triple-A development on the main consoles was 12 or 15 years ago, where there was, I would say, ten-to-20 people making a game for the original PlayStation. Quickly those team sizes went up and up, and kept doubling."

THE TRIPLE-A FAST TRACK

However, that pace and energy that makes iOS development so appealing to console teams may also accelerate studios committed to mobile to a point that mirrors today's arguably challenged high-end console gaming space.

"This trend is going to change quickly, because those devices are getting more powerful all the time," concludes Charpentier. "As that happens, surely we will need more people. It's the same as the change in the console space from PlayStation 1 to PlayStation 3.

"Perhaps the 'iPad 4' will be more powerful than a PS3, and you will have big players wanting to do triple-A on the device. I don't see how they will avoid having at least 30 or 40 people on the game. That is even already the case at some places making triple-A games for mobile."

Considering Capps' prediction of the first $1 million iOS game budget, Charpentier could be right. It may even be possible that in a couple of years the iPad market will be dominated by big hitting studios with millions to burn.

For now, though, developing for mobile and tablet is giving established triple-A developers a refreshing change; a feeling of a return to an earlier time, when fierce creativity and advances in technology made the games industry seem like the most exciting place in the world.

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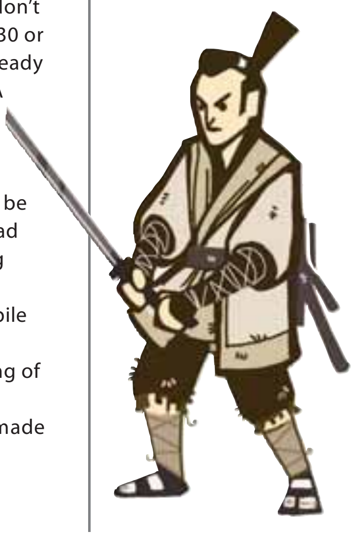

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Look who's talking

The organisers of the 2012 Develop in Brighton Conference have made public the details of the first sessions confirmed for the coastal industry gathering. **Will Freeman** takes a look at how the event is shaping up

Last year's Brighton conference saw the likes of Miles Jacobsen, Phil Harrison and David Braben discuss the issues at the forefront of the games industry

WHILE JULY'S DEVELOP in Brighton Conference may seem many months away, the industry exodus to the UK's south coast will soon be upon us.

The first sessions for the event have now been announced, and paint a picture of an event that looks set to be more diverse and stimulating than ever before.

Industry luminaries including Ian Livingstone, David Perry and David Braben are already signed up to speak, as are some of the games development sector's most interesting companies, including Microsoft Soho Studio, EA Dice, Sony Computer Entertainment and Mind Candy, which is making its first ever tech-focused presentation.

"We're really excited about this year's conference programme," says Andy Lane, MD of event organiser Tandem. "We always aim to offer sessions that reflect what's going on in the industry – from the imminent arrival of IPTV and its impact on gaming at Evolve on Tuesday, to the latest wave of indie games that are hitting the streets at the Indie Dev Day on Thursday. Across all three days, we've got some great speakers lined up.

"We're delighted that industry heroes like David Braben, David Perry and Ian Livingstone are joining us as they always offer true insight and inspiration, and we haven't even announced our keynotes yet so watch this space."

The conference again returns to the Hilton Metropole in Brighton, UK, this year running from July 10th to 12th, in parallel with the Develop Awards, which take place on July 11th. Last year's conference attracted more than 1,500 game developers from more than 20 territories.

This year's Develop in Brighton Conference offers a wealth of tracks, including Art, Audio, Business, Coding, Design, Education, Evolve and Production.

www.developconference.com

THE SESSIONS SO FAR

Looking for a flavour of what the 2012 Develop in Brighton Conference will offer? Here we bring you a pick of the best sessions and tracks confirmed so far, as well as details of the new 'Reloaded' sessions

KEY SESSIONS
- The Raspberry Pi Story So Far by David Braben, Frontier Developments
- Life is a Game by Ian Livingstone, Square Enix

EVOLVE
- HTML5 is a Gaming Platform for Today, Not Tomorrow by Gavin Shields, Turbulenz
- The Evolution of Casual Gaming and the Rise of IPTV by Jeff Coghlan, Matmi
- 30 Apps in 45 Minutes by Stuart Dredge, Journalist

PRODUCTION
- Pitching to Publishers: How to Impress and What to Avoid by Pete Smith, SCE
- Effective Data Analysis for *Battlefield 3* Pre and Post Release by Brynjolfur Erlingsson, EA DICE

CODING
- How HTML5 Can Power Your Game Production by Richard Hackett, Blitz Games Studios
- Creating Scalable Game Servers and Tools in Scala, a Guide for Game Programmers by Mark Baker, Mind Candy
- Augmented Reality on Vita by Diarmid Campbell, Sony Computer Entertainment Europe

DESIGN
- Can Linear TV Ever Be Interactive? We Say Yes! by Josh Atkins, Microsoft Soho Studios

- Designing a Game of Grand Strategy: Perspective on the Mechanics of *Total War* by James Russell, The Creative Assembly

ART
- Playing With Clay: Making Claymation Work in a Game by Iain Gilfeather, Fat Pebble
- Finest Organic Produce: How To Make a Handcrafted Video Game by Gordon Midwood, Different Tuna

INDIE
- One Hour Tower by Andrew Smith, Spilt Milk Studios
- Beat the Post-Launch Blues: Your Game is Out, What Now? by Rob Davis, Playniac

EDUCATION (NEW FOR 2012)
- Specialise or Generalise? Lessons in Postgraduate Games Education from the National Film and Television School by Jon Weinbren, National Film and Television School

BUSINESS
- Five Industry Pitfalls for 2013 by Mark Gerhard, Jagex
- Broadcaster Lessons To/From the Games Industry by Colin Macdonald, Channel 4

This year the Develop in Brighton Conference also introduces the 'Reloaded' sessions, in which games industry legends talk about their experiences making iconic games from the 1980s. The 'Reloaded' sessions include Andrew Oliver of Blitz Games reflecting on the ZX Spectrum, and an *Earth Worm Jim* postmortem by Gaikai co-founder David Perry.

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Richard Firminger, European Managing Director, *Flurry*

Paul Bowen, Managing Director Europe, *Tapjoy*

Christian O. Peterson, Vice President Community, *Cloudmade*

Stephane Bura, Lead Designer, *Nameste*

Caspar Thykier, Founder & Managing Director, *Zappar*

Jess Butcher, CMO & Co-Founder, *Blippar*

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Standing together

Despite a strong heritage in traditional games development, the Yorkshire area of the UK has moved to keep up with the latest industry trends. **Craig Chapple** asks local studio heads how collaborating has helped herald a new era for the area

Yorkshire studio Sumo Digital's *Sonic & Sega All-Stars Racing*

THE YORKSHIRE REGION in the UK is home to some of the UK's most longstanding and successful studios. The likes of Revolution Software – formed in 1990 and famous for the *Broken Sword* series – and Team 17, founded in 1987 as 17-bit Software before a change in name in 1990, show that the Northern county has a strong history in games development.

It is this heritage from a number of developers, and the likes of the now defunct Gremlin Interactive, that has meant Yorkshire has been able to grow into something of a development hub for the industry.

LITTLE AND LARGE

The region now boasts a plethora of studios large and small, such as *GTA: Chinatown Wars* outfit Rockstar Leeds, *LittleBigPlanet* Vita developer Double Eleven, *Oddworld* dev Just Add Water and Sumo-Digital, responsible for portable titles such as *F1 2012* and *Split/Second: Velocity*.

"Yorkshire has a strong game making heritage stretching back to the '80s and '90s. Many large studios have been based here, and a lot of the talent has remained," says Double Eleven technical director Rob Ware.

Simon Barratt, MD of independent developer and middleware outfit Four Door Lemon, agrees that the area now has a wealth of talent, in part thanks to its roots, and believes many industry veterans from that period are now returning to a positive and resurgent county.

> ***"Our companies are masters of their own destiny; they can release stuff and get 70 per cent of the profits at once."***
>
> Jamie Sefton, Game Republic

"We always seem to have a great wealth of home-grown talent here. Some of it has perhaps moved away but many of those people also find themselves returning to the region," says Barratt.

"I guess 20-to-40 years ago there were a lot of bored kids in the area with a passion for computers. Certainly, internally we have a lot of people from the immediate area who have worked at very senior levels in some of the biggest studios in the world and they come back home and love working as part of the team."

Many of the local developers also speak glowingly about the cost of living and quality of life in the region, which offers up both rural and urban areas to accommodate for all different types of lifestyles. The area is also home to a number of universities that offer courses in programming and games development, of which the University of Hull and Sheffield Hallam University are accredited by Skillset, which has only awarded its certification to nine such courses in the UK.

But far from being just content with what it has, Dubit's CTO Matthew Warneford says that the studio's in the region are exceptionally hard working, with devs often coming together to help one another on development problems when required, creating a sense of togetherness not often witnessed in the rest of the UK.

"Yorkshire has some brilliant studios working on great games. I don't know why but historically Yorkshire seems to foster these kind of enterprising companies," says

Four Door Lemon's Vita AR game Table Football (top-left), and Dubit's hip studio space (top-right). Above, top-to-bottom: Team 17's Nick Clarkson, Paul Porter of Sumo Digital, and Matthew Warneford from Dubit

Warneford. "It could be because of there is a real community here, fostered in part by the work done by Game Republic."

A NEW REPUBLIC

It is this sense of community that separates Yorkshire from many other development hubs in the UK, which those situated in the region put down to the work of the aforementioned regional networking organisation Game Republic.

Led by Jamie Sefton, the group faced near closure last year after public funding ran dry due to government cuts, but was eventually saved by local studios and institutions who saw the advantages of keeping the organisation. Now performing its work as a privately funded entity, Game Republic promotes collaboration between developers through various events, whilst also bringing the companies to the attention of investors and the big console manufacturers.

"It's great for them because they get to meet 20-to-30 companies in one go, and meet some amazing companies that can give them some great content," enthuses Sefton.

"And for our companies it's fantastic because they get to meet the key holders for those digital platforms. Also it means the companies and the universities can network together so it means you get some brilliant collaborations going on simply because you're at the same meetings. Bigger companies might outsource to other companies within the region when they need that additional help and it helps to grow the industry and keep the money within the network."

The organisation has since doubled its membership in the last year to a substantial 52, and Sumo Digital's studio head Paul Porter says that Game Republic has been essential in growing a vibrant community, and is excited by the potential the collaboration brings to Yorkshire.

"One of the benefits of the varied nature of studios in the region is that when we do come together there's always a tremendous buzz in the atmosphere and lots of cross-pollination of ideas," explains Porter.

"Sumo has been doing well in the last few years and has a lot going on. Success can bring its own challenges and to meet those we sometimes collaborate with other studios in the area, which has helped to bring more work into the region."

But this reputation for collaboration has not just been built up thanks to the work of Game Republic, for it has come from what Barratt describes as set of friendly studios, willing to help other studios out so the entire region can be a success.

> ***"One of the benefits of the varied nature of studios in the region is that when we do come together there's a tremendous buzz."***
>
> Paul Porter, Sumo Digital

"Being already familiar with what everyone else is working on and just being able to pick up the phone for a quick catch up means that collaboration is quick to setup and fairly risk free for companies large and small" he says.

"Everyone tries to look out for other developers in the area when they can and for Four Door Lemon we've enjoyed several collaborative projects in the past few years from providing a few days of consultancy to six-month projects providing all the programming on certain projects."

Team 17's communications manager Nick Clarkson is slightly more cautious of the excitement surrounding the sense of community however, saying the situation in the region is a matter of opinion and something that is not exclusive to Yorkshire.

"Whether there's a sense of community is open to debate," he states. "There's no doubt that Yorkshire developers do have a community, but it's not exclusive. Collaboration at a local level makes life easy but the best solution may be further afield."

MOVING WITH THE TIMES

As well as a focus on working together, developers in the county also seem to have shifted concentrations on games development away from home console, and towards handhelds and new platforms such as mobile and digital. Although unlikely a deliberately collective move, the region highlights an industry shift away from traditional platforms, and offers a glimpse into what future development hubs may look like.

Sumo Digital, Double Eleven, Revolution Software and Team 17 have all developed for digital and handheld releases, and Sefton says this has likely happened as companies are able to control their own futures whilst having the potential to make more money if they go it alone.

He says that when he joined Game Republic in 2008, the business model focused on work for hire, but believes it has changed enormously in the short time since then, with the App Store a hugely important new shift in the industry.

"Revolution Software's Charles Cecil now makes more money from a £3 game than he does from something that was released from retail at £30," he explains. "And he gets it every month, rather than having to wait a couple of years and maybe get some money from a publisher.

"The fact is that our companies are now masters of their own destiny, they can release stuff and get 70 per cent of the profits at once that they can then reinvest in new projects.

"It's been an amazing transformation. It's kind of back to the golden era when they could publish themselves and also get the money themselves."

Stewart Gilray, CEO of Just Add Water, believes that because the region is home to many independent developers, the costs

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Above, top to bottom: Simon Barratt of Four Door Lemon, Just Add Water's Stewart Gilray, Double Eleven's Rob Ware, and Game Republic's Jamie Sefton. Above right: Sumo's take on Sega Rally

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associated with a boxed product at retail have proven somewhat prohibitive, especially when compared to the commercial viability digital can offer studios.

"We've only really got Rockstar Leeds that are big on the whole triple-A disc-based product. The rest of us seem to prefer digital, and I think that's because a lot of us self-publish," he says.

"As such we can't really afford manufacturing retail product, so digital is the way to go. Especially with it highly likely that the future will be mostly digitally led."

Clarkson agrees with Gilray's assertions that digital and mobile have become more economically viable for smaller studios, and believes it allows developers to have a steady stream of content release throughout the year, rather than pinning their hopes on long and expensive development cycles with scarce release schedules.

"The simple fact is that unless your development is underpinned by a large global publisher it doesn't necessarily make good business sense to spend a couple of years working on a traditional console title," he explains.

"Smaller developers need to have liquidity in their business, and that means smaller projects with quick turn around times. The volumes that can be achieved on digital and mobile platforms can be significant, and many developers prefer to have three or four revenue streams each year rather than just one."

MONEY FOR SOMETHING

But being able to develop for digital, mobile and handheld of course doesn't come free of charge, with funding representing one of the crucial challenges afflicting the region, and developers across the UK.

Screen Yorkshire recently announced a £15 million fund for TV, film and games production, of which £7.5m has been provided through an EU initiative, to help the region attract new talent and contracts. A group of unnamed private companies has also pledged to match individual investments, effectively turning it into a £30m funding pool.

But despite this and other programs in place to help studios with game creation and publishing costs, devs still clamour for support from investors and the UK Government, which recently proposed a tax breaks program. Yet even that must overcome a series of obstacles, although the recent extension by the EU of the 'cultural test' to 2018 could pave the way for such relief schemes.

Double Eleven's Ware says that whilst the region's industry isn't under too much pressure in general financially, more needs to be done to keep competitive.

"As industries go, I think ours is in relatively good shape and the small flexible studios in the region are always well placed to take advantage as the industry evolves," he says.

"That said, greater government support for the creative digital industries would help keep us on a level playing field with development hotspots elsewhere in the world, so we look forward to seeing the government follow through on its recent pledges."

Sefton says that he has looked to help out the studios as part of his role in charge of the industry networking body, but feels it can be hard to convince venture capitalists to invest.

> ***"Smaller developers need to have liquidity in their business, and that means smaller projects with quick turn around times."***
>
> Nick Clarkson, Team 17

"I think a lot more can be done – and I'm trying to do it as well – to educate investors in this region about how great the games industry is," he says. "Especially angel investors, because VCs tend to want to put £10m in and get £100m out. It tends to be the angel investors that I'd be talking to, to try to get interest in the games companies in our region.

"But the best way of supporting companies, and the way we've done it at Game Republic, is helping them help themselves. Being there to help companies network and use each others resources if they need, and share information. Really that's the best way to help companies in this region, and give them the tools they need to succeed."

EDUCATIONAL LESSONS

Another challenge the Yorkshire region surprisingly faces is in training and acquiring local talent, despite its two local Skillset accredited courses at two of its universities, and the nearby Milddlesbrough-based Teesside University. Whilst these programs fill requirements few in the country have been able to achieve, there is a mixed reaction from developers on how effective they have been in developing industry professionals up to an acceptable standard.

"I have to be honest here and say no," Gilray says in regards to whether he was happy with what local games development courses provide. "Via Game Republic we take part in an event to judge students from the big universities in Yorkshire on their final year work/projects, and I have to say over the past couple of years there have been some students that shouldn't have been allowed to take part. They only account for a tiny amount, but still.

"There seems to be a problem nationwide with courses where the people leading these courses really have no clue about game development. Yes, some are now appointing industry veterans to help set-up and improve the courses, but it is fair to say that some really do need to address what they are teaching the students. Over the past year we've hired five graduates, only one is from a Yorkshire university, and that has been

indicative of the general quality of the graduates themselves I feel. Not something I'm happy to say though."

Sumo's Porter partially agrees with Gilray's statements, but suggests there is also plenty to be happy about in the region, although students should perhaps be encouraged to do their own thing, given the array of options available to todays developers.

"Taught game development is something that is going very well here in Sheffield," he says.

"However, some universities still teach game development with Java which is not at all appropriate for us. We have got really good relationships with our local university and there is some really good talent coming through.

"It would be nice to see local institutions and students being more entrepreneurial and creative. Those students have a huge opportunity to try and create apps and small games which they can self-publish."

GO NORTH

Despite these challenges, Yorkshire looks to be in a healthy position to face its problems head on, and better placed perhaps than many other regions in the UK with its skillset accredited local courses and funding initiatives. In that context, local improvements do not appear to be far off.

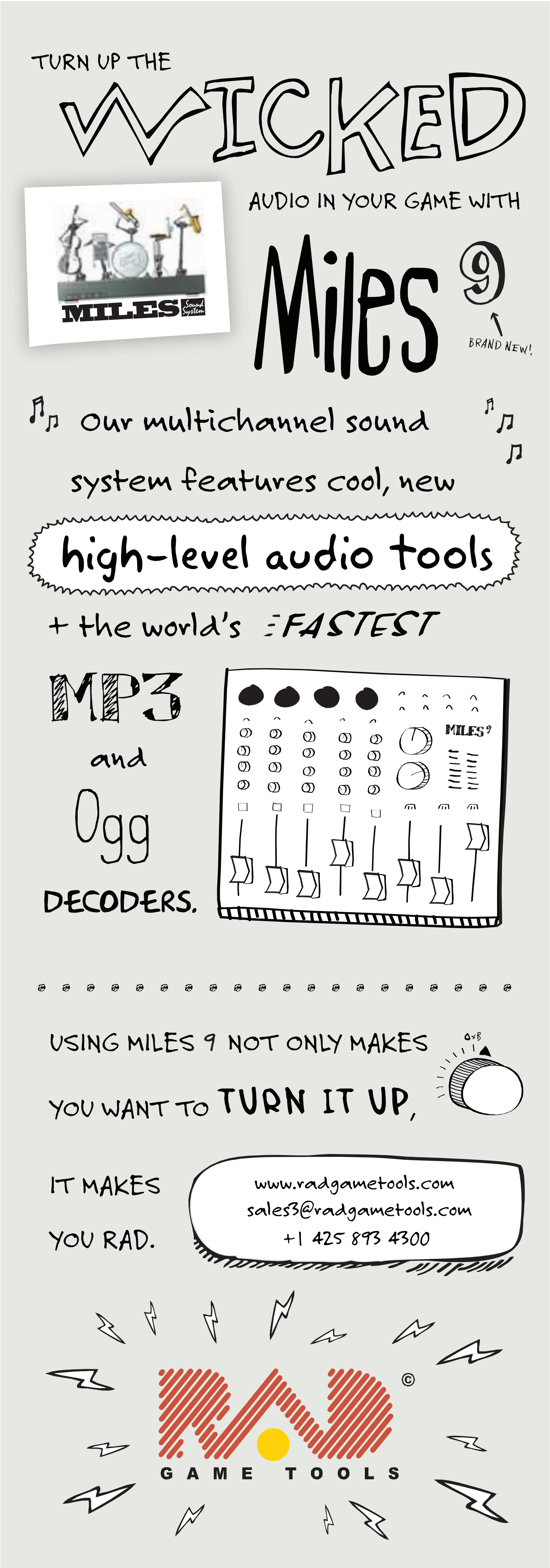
"As the importance of a southern location begins to matter less I can see more studios moving to Yorkshire, or perhaps opening a Yorkshire office," says Dubit's Warneford.

"For those already here the outlook is good. We have some excellent educational establishments producing talented individuals and the development scene in the region is really exciting.

"Conditions are just right for another Yorkshire studio to make it big."

Double Eleven's Ware believes that not only will studios in the region overcome these issues, but through their reputation of working together, could perhaps turn this region into a world leading development hub in future, showing that confidence in Yorkshire is not in short supply.

"Hopefully the newer studios will become more established and new ones will continue to emerge," he says. "At the same time collaboration will evolve and strengthen all involved, and as the economy picks up in general hopefully we'll be well positioned to affirm our position as world leaders in making games, as we always have been, and should continue to be."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Testing people

Testing and QA's key thinkers analyse the past, present and future of their discipline, p52

A tool for tools: Fabric Engine

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Autodesk's Animation Store

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Assuring Quality

With developers becoming increasingly ambitious with their creations, and mobile offering up a plethora of new options, **Craig Chapple** looks at where the practice of games testing fits into the current industry landscape

The testing process not only provides an entry point for a career in the games industry, but a vital service for developers of every shape and size

THE PROCESS OF QUALITY assurance in the games industry is arguably now more important than ever, in a sector where a reputation can be tarnished by a few game breaking bugs, and many customers base their purchases on a metacritic score alone.

Users want a smooth playing experience, especially when triple-A titles can cost as much as £50, and the expectations for quality are higher than ever. Games such as Bethesda's critically acclaimed *Elder Scrolls V: Skyrim*, whilst undoubtedly ambitious and well received, also suffered from a public backlash over the internet due to apparent PS3 performance issues, which were allegedly spotted in testing, and the infamous 'backward flying dragons' after an early patch.

Whilst sales did not suffer, and the title has become a huge success for the developer, it is easy to see how just a few bugs can outweigh lofty ambitions and somewhat tarnish a game playing experience, whilst triggering an empassioned online reaction.

DEMANDS OF THE INDUSTRY

"QA influences public perception, as well as the practical application of a title. Information and reviews are more readily available," says Alfonso Lombardi, director of games testing and development at VMC Labs.

"Because of the wide variety of choices now available and increased competition, quality is no longer optional, and a lack of quality can be a killer.

"Five years ago customers were more inclined to accept errors and lesser quality in titles. Today, they have higher expectations, and QA is more important than ever."

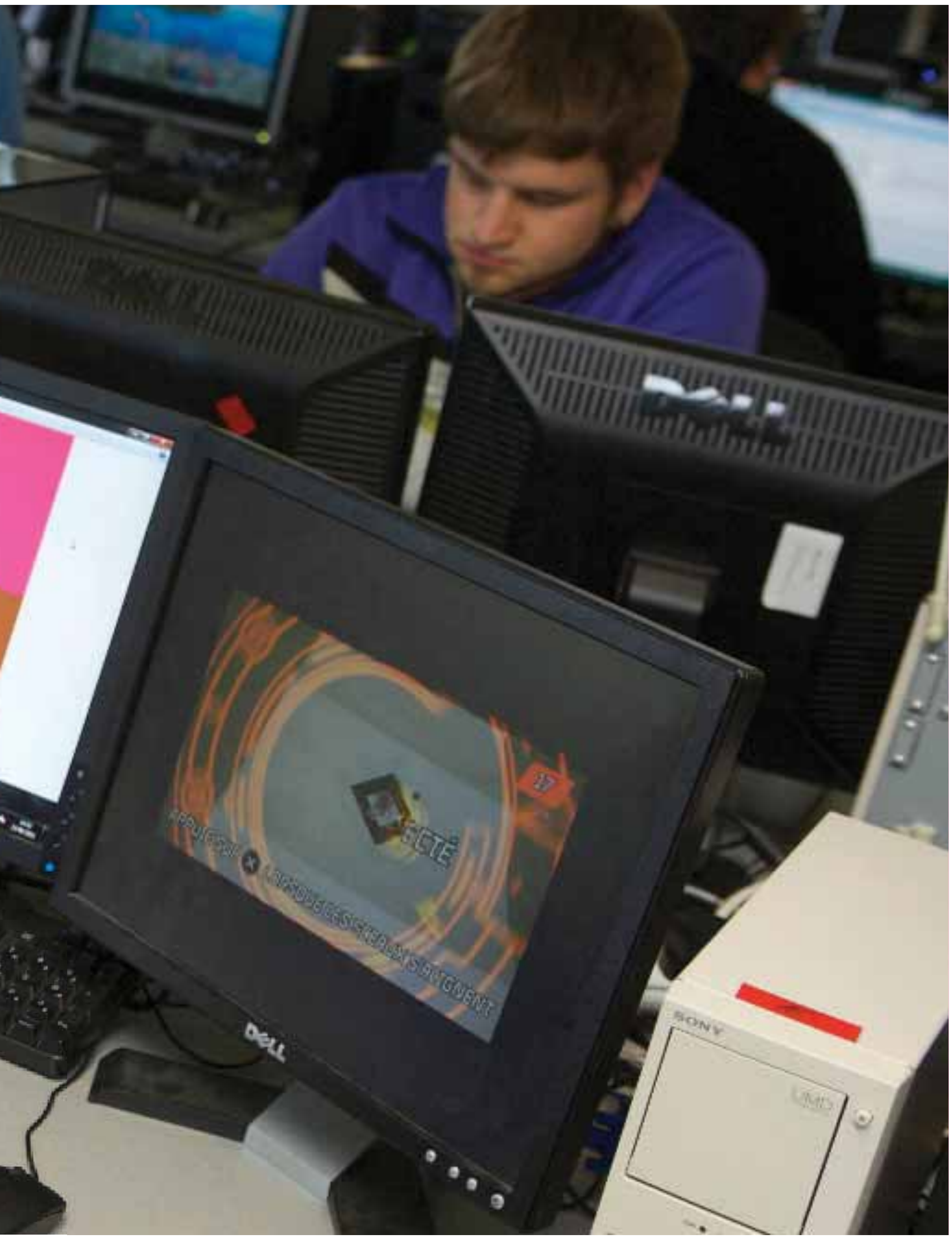
> ***"Why would you want to take the risk of not considering a QA roadmap, given the inherent risks in making a game?"***
>
> Alastair Harsant, Testronic Labs

As well as customers, console manufacturers and the likes of Apple demand that games pass a certification process, and be deemed of certain quality before they can be released on their systems, as poor games can also affect a platform's reputation. It could be argued, however, that these tests are not as stringent as they perhaps could be, with the App Store rocked by scams such as fake *Pokémon* games and titles which do not live up to their descriptions.

And with sequels becoming ever more popularly used in the industry, with games such as *FIFA* and *Call of Duty* releasing yearly, consumers today have the chance to buy into something they are familiar with. In that context a game's quality can be the difference between short term success and the viability of a long term franchise. Without proper testing, promising ideas and large investments can mean nothing.

"QA is incredibly important, on the simple assumption that the IP holder wants to maximise the return on their investment," says Alastair Harsant, games business line manager of Testronic Labs.

"We believe everyone making a game wants it to be well received, to work with no glitches, to have no progression blocking issues, and to have audio and text technically and realistically localised for the target market it is released in. Why would you want to take the risk of not considering a QA roadmap,



given the inherent risks in making a game? The focus on quality has only increased over time, although there is content out there which has clearly not gone through a QA process. It is as if we are now in an environment of extremes."

The QA process can start as early on as the design phase, with specialists helping developers as the creative process begins, working out feasible aspects of a game's development, identifying logic flaws in requirements and using their experience to highlight likely bumps in the road ahead. The process then accompanies the game's creation through alpha, beta and certification stages, beyond to release and then even post-launch, with updates and the advent of DLC in recent years becoming ever more popular.

RISING EXPECTATIONS

But the integration of a solid quality assurance practice throughout development has not always been recognised as integral to a game's creation. Whilst its importance at some stage has never been in question, Testology's managing director Andy Robson says the industry's awareness of games testing has greatly risen over the past ten years.

"Ten years ago, opinions on the importance of QA were perhaps divided," says Robson.

"Having said this, Bullfrog and Lionhead Studios always regarded QA as a department with high importance. I think the importance has always been high, but the industry's awareness of this has developed."

> ***If a customer is to pay $50 or $60 for a major title, it better work right. The customer is demanding much higher quality.***
>
> Linda Lemieux, VMC Labs

Lombardi agrees that games testing has become more prominent than ever, and highlights the example of a large publisher that demonstrated an in-development title, only for the demo to fail within the first minute of play. He says this resulted in word of the failure spreading quickly across the internet, with the title then shelved for 18 months.

Lombardi's colleague at VMC, Linda Lemieux, director of development, integration and QA says that as well as the need for a good reputation, with the internet allowing unhappy customers to quickly come together and speak out, the plethora of options available means that demand for quality is higher than ever.

"QA has always been important. However, today the consumer has many more options," she explains. "They are used to paying a dollar or two for a good product through online services. Because of this competition, price sensitivity and lower price points, if a customer is going to pay $50 or $60 for a major title, it better work right. The customer is demanding much higher quality."

Babel CEO Richard Leinfellner believes that the importance of outsourcing work to external games testers has also come from industry changes and tough economic times, with many companies restructuring with smaller output, leaving internal QA teams with a reduced volume of work.

"With many publishers these days downsizing, more often than not, they won't have the throughput of titles needed to keep their in-house QA groups sharp, which means they may miss things leading to unwelcome delays just at a point where they should be getting much needed revenue in," he says.

GOING MOBILE

Whilst the importance of testing in triple-A titles for console and PC has become more prominent, the rise of mobile and app stores has offered up a mixed reaction towards the process. Whilst titles must be certified by Apple before they can reach the App Store, as explained earlier, how stringent these test are is up for debate. Developers working on Android meanwhile do not require any form of certification, meaning the quality of apps can vary widely.

Leinfellner says that whilst it can be easy for devs to use the public to beta test its titles, this method is not conducive to long-term success, as the negative reviews begin to stack up.

"As a small developer it must be tempting to see the customer as a free tester, however the novelty for the consumer soon wears off and buggy games end up dropping from the charts rapidly," he explains.

"Babel do understand the issues of cost though, which is why we invented our low cost, fixed price TestMyApp and LocaliseMyApp service. Triple-A go to market services on a fixed low price."

VMC's senior program manager for mobile services Jon Atkinson says that just five years ago, releasing content on mobile required passing certification programs, providing a baseline in terms of acceptable quality. This required developers to conduct testing of their products to ensure they could meet these standards. But Atkinson believes this has changed, although serious mobile developers can see the importance of testing.

"The advent of the App store, and developers being able to submit content directly to the store, in some cases with no quality assurance, has led to a reduction in the overall level of quality built into content," explains Atkinson.

Alastair Harsant of Testronic Labs (top), Alfonso Lombardi from VMC Labs (middle) and SQS India's Gireendra Kasmalkar (bottom)

Proof that testing can be fun (top). Keywords International's Paul Vigneron (middle) and VMC Labs' Linda Lemieux

"However, for serious mobile developers, QA is even more important than previously. There is so much content available right now that quality, in terms of user feedback, has become a key differentiator. Companies who recognise this are willing to invest the time and resources to ensure quality."

For those mobile developers that do look for quality, this has meant QA companies have had to adapt to the needs of smaller development projects, and become more agile and flexible to meet demands. Keywords' business development manager Paul Vigneron says this has made things more difficult, having to deal with a large number of small games, and the challenge is making sure to stick to good testing practices, no matter what the title.

"I think really the main challenge is to make sure that you adhere properly to good QA processes. That's very important. It helps move things on and means they can be applied to whatever platform you have to work on," says Vigneron.

"And this is important for consistency as well because many times, especially now with bigger titles, they release on consoles, and have supporting mobile applications, like *Mass Effect 3* for example. The game arrived on console and PC, but you also have an iOS app that goes along with it."

Vigneron states though that some iOS projects can be nearly as big as triple-A titles on console, highlighting Square Enix's *Chaos Rings*, for which Keywords did all the localisation, translation and QA. He says the fantasy RPG title included more than 150,000 words that needed to be checked and translated; a feat that could likely be more commonly repeated as developers become more ambitious with mobile platforms.

For many though, the current state of the mobile landscape is enough for it to be a huge part of their QA business, despite the inherent difficulties with scalability. Testology's Robson says that a plethora of companies have continued to start up on mobile, Facebook and digital, and they have had to adapt their teams and prices to suit.

"This has been a huge part of our business, as more and more companies are starting up, and switching to mobile, Facebook, browser and digital," states Robson. "We have had to adapt our services and fees to these groups, as the budgets aren't as big as the triple-A titles. I know developers still need QA on these smaller projects, which is why we have tailored our services and rates to cater for this, as they still need to ship a quality title."

> ***"I know developers still need QA on smaller projects, which is why we have tailored our services and rates."***
>
> Andy Robson, Testology

A CONTINUOUS SERVICE

As well as scaling for mobile development, testing services have seen an increased workload from triple-A projects in the form of downloadable content and various patches. Whilst console manufacturers often make the updating and DLC process somewhat prohibitive with high costs for implementation, many large studios are still keen to release expansions to extend a game's lifecycle.

The likes of *Mass Effect, Fallout* and the *Call of Duty* series have seen numerous downloadable packs long after their initial releases, but SQS India CEO Gireendra Kasmalkar believes that in the scheme of things, these updates have made little impact on how QA is performed.

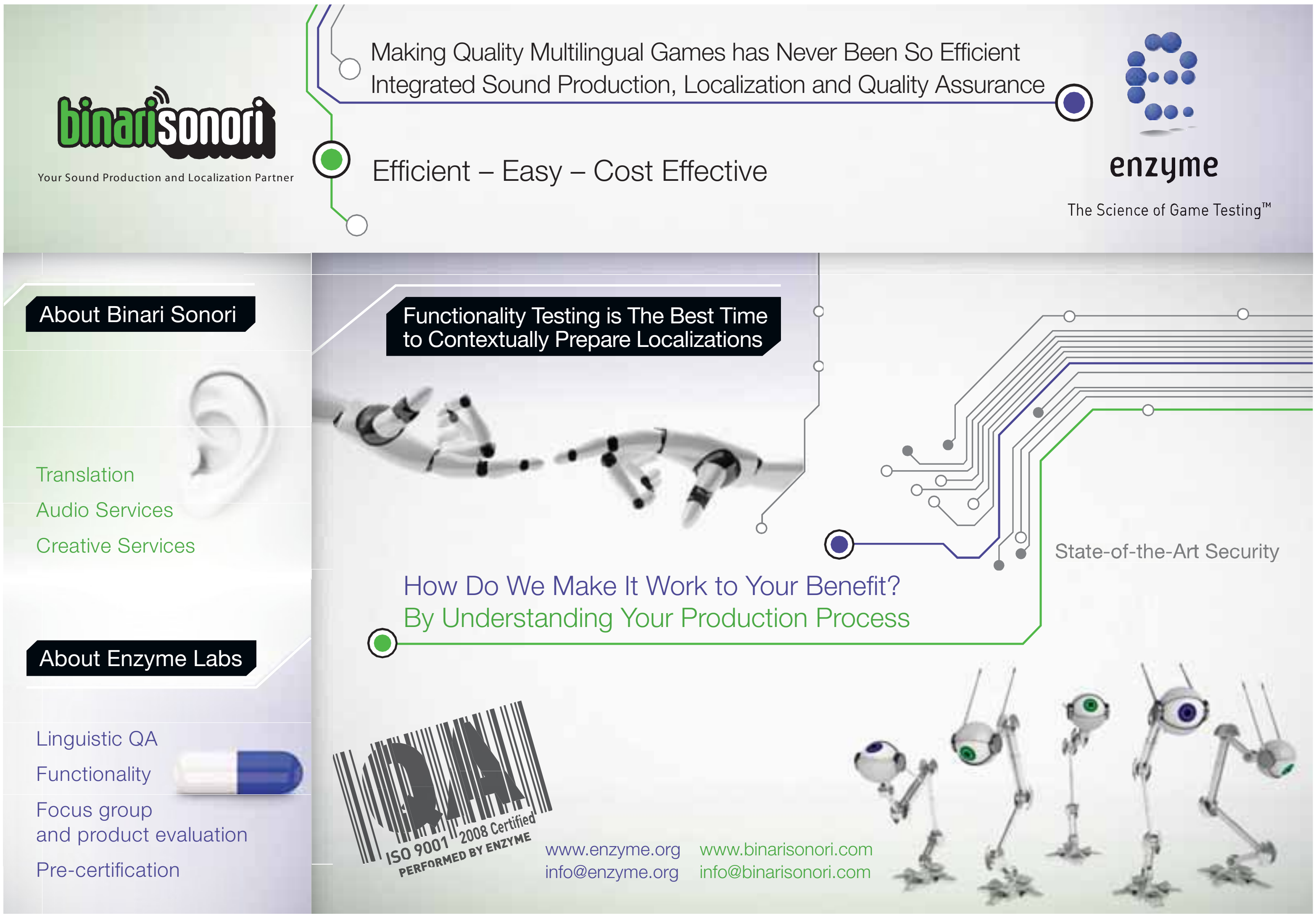
"DLC or downloadable content makes games more like other software apps nowadays, whereas they used to be more like movies in their releases," says Kasmalkar. "The QA process can be more agile all year long, as the peaks and troughs of QA requirements are simply not there for DLC."

Whilst DLC has perhaps not had a great effect on testing practices, VMC's Lombardi says that QA is critical to the successful implementation of new content, as changes made can easily affect a game's original coding and cause problems for users.

"QA here is critical because downloads and upgrades have to be high quality, or the consequences are extremely negative, not only for the new content, but also extended to the existing content that may have had high quality to begin with," he explains. "Consumer perception is directly tied to the quality and performance of DLC and updates."

Testronic's Harsant also says that the fundamentals of what is required for DLC work are no different than the work put into a title's initial testing period for certification. But he states, however, that considerations need to be taken into account such as whether the original team can be moved to the project, and also the short turnaround times required for new content.

"There are additional considerations such as 'can we use the same team that checked the original build?' Clearly having the operational flexibility to do this is a challenge, but we are



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Testology's Andy Robson (middle) and Babel's Richard Leinfellner (bottom)

used to this at Testronic," he says. "The core differences ultimately are the timeframe and spend – typically last minute requests, for a short period of time, and being able to use previous resource expertise on the game."

TESTING WORKLOADS

It is this short timeframe in downloadable content and often during deadlines for a normal title's development where the controversial issue of crunch has leaked into the QA process.

Whilst the concept of squeezing in extra hours and manpower to finish a game is no secret to developers, and often fully anticipated, the heavy workload creeps over to games testers who must then make sure quality is assured and iron out any bugs in a tight timespan.

Vigneron describes the situation as an unfortunate reality for the industry, although believes that this is something that will change in future, but not anytime soon.

"It's not something that we necessarily appreciate. However, we do see a necessity almost, of the really high-paced, 'get the game out' environment we're working in," he says. "So we know that these were effects of developers. They don't necessarily want it. Sometimes they do plan for it, but that doesn't mean they want it.

"Our teams work very closely with development teams as and when so we can align ourselves with their schedules. There are ways to do it differently, and so I think that things will change, but maybe not drastically. Or not anytime soon at least."

Harsant agrees that crunch can be a necessity in games development, and says that QA staff are impacted in a similar way to developers, and believes that during the last few years this has seen some slight changes in the way games testing operates.

"Over the last couple of years, we've seen a shift for ramping teams up in the remaining weeks and days to ensure the coverage is there. We accept it – it is the way of the world we work in – so we embrace it," he asserts.

"However, we don't lose sight of why we are here, which is to provide great quality of service to our customers. We don't do or like to use short cuts in this process, unless of course we are talking about using de-bug."

> ***"Over the last couple of years we've seen a shift for ramping teams up in the remaining weeks and days to ensure ."***
>
> Alastair Harsant, Testronic Labs

VMC's Atkinson says that the issue of crunch is less of a problem now than in years gone by, as the development lifecycle has changed, with mobile content and triple-A games being released throughout the year and becoming less seasonal.

The result of this has meant workforce levels have remained more constant as companies do not have to dramatically resize during quiet periods of the year or a particular project's schedule.

"In the past year, we have seen little discernible variation in workforce levels," Atkinson states. "This has enabled a more experienced team to maintain full-time and career opportunities, improving quality and reducing the stress around ramping up that used to be one of the bigger challenges we faced in the QA sector."

A TESTING FUTURE

But despite the issues of crunch, which although notorious in the games industry, the QA firms have taken on in their stride, the sector is undoubtedly becoming significantly more integral to the entire games development process.

Whilst many of the core aspects of games testing remain largely unchanged, companies in the sector have had to make sure their service is more flexible, so as to cope with the influx of small and large projects.

"Flexibility, agility, broad platform experience, consultancy, scalability – these are just some of the areas that have and will continue to shape our operational processes going forward," explains Harsant.

"We have gone though a shift in our ways at Testronic Labs, and we have had to consider all of those topics.

"We routinely ask these questions and will continue to, but we will never lose sight of our primary purpose – which is to provide great quality assurance coupled with excellent client communication so as to ensure a great experience – and get them through submission."

The strive for quality and ambitious large scale triple-A games, coupled with thousands of developers creating content for mobile platforms, has meant that games testing providers are not short of work and customers throughout the year. And with the need to stand out above the rest and receive positive reviews and critical reception, quality assurance is an absolute necessity if developers are to achieve true success.

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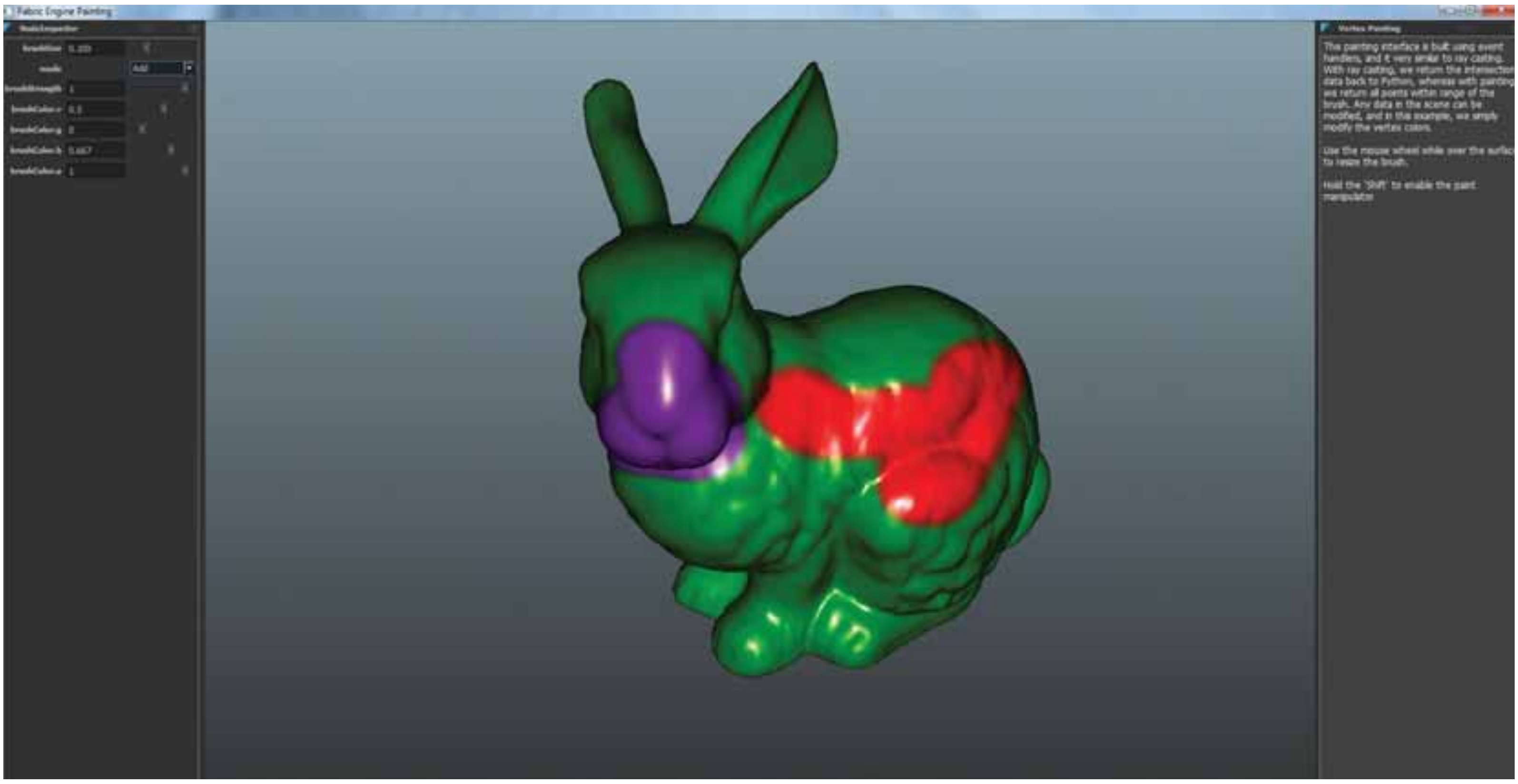
Tooling up

The Fabric Engine is a brand new technology specifically for developing in-house tools. **Will Freeman** asks the tech outfit's CEO and co-founder Paul Doyle why games developers should pay attention to this distinct solution



Fabric Engine (top) promises to be hugely useful to games developers, says CEO Paul Doyle (above)

BEFORE WE GET into the details, could you tell us more about Fabric Engine the company, and give us an overview of the technology itself?

Fabric Engine was started about two years ago by myself, Philip Taylor and Peter Zion. We knew each other from our time at Softimage, where Peter and Phil worked on the development of Interactive Creative Environment (ICE) for Softimage XSI. Phil was also the creator of Character Animation Toolkit, which was acquired by Softimage and is now part of 3ds Max.

Most of our team worked together at Softimage and Autodesk, and three of us worked in the Games Technology Group at Autodesk. Needless to say, we have extensive experience in building tools for the VFX and game development markets.

Phil and I spent a lot of time evangelising the benefits of ICE – we loved the fact that it made it easy for technical artists and TDs to write high-performance tools. This inspired Phil to start thinking about how to address the problems we saw in 3D animation; every production requires extensive tool customisation and development to achieve its goals, yet the major applications used in the industry were not designed for this kind of customisation.

We believed that a 'tool for building tools' would be valuable; something designed for high-performance and ease of use, that was completely open and modular.

This led to the creation of the core of Fabric Engine, the technology, which is a high-performance processing engine that integrates with dynamic languages – like JavaScript and Python – by exposing an interface for defining multi-threaded native code operations. The developer provides a high-level description of concurrency, and Fabric Engine takes that description and dynamically compiles it.

> ***"We believed that a 'tool for building tools' would be valuable; something designed for high-performance."***
>
> Paul Doyle, Fabric Engine

Dynamic languages are easy to use and they enable rapid iteration, since there's no compile-wait-execute delay. However, these languages perform poorly when compared to the speed that statically compiled languages like C++ provide. With Fabric Engine, we designed something that could give developers the best of both worlds – easy to use, fast iteration and performance that matches multi-threaded C++.

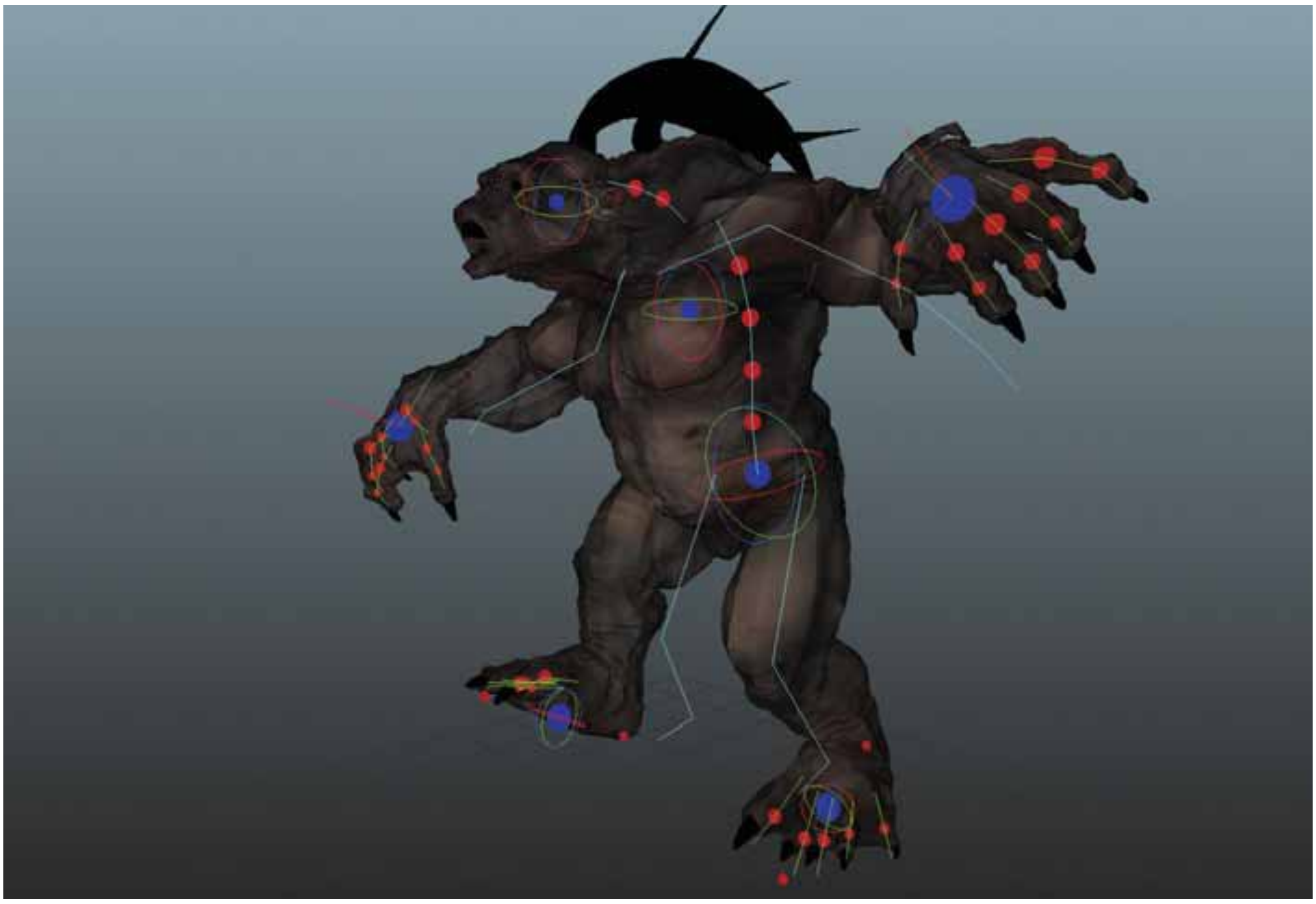
On top of this core engine, we provide 'stacks' of technology to help people build the tools they need. This includes a Python scenegraph, rigging tools, animation tools and an extension system to allow the inclusion of existing libraries. This is important as it allows us to support formats like Alembic, FBX and Collada.

So you've essentially created a tool for developing high-performance tools?

Exactly. We enable developers to focus on building the tool they need, rather than spending time focusing on architecture and plumbing – the low-level elements that have to be handled but are often jerry-rigged due to the pressures of production. Time spent building a tools architecture is time that is not being spent on the production itself.

Why should games developers use Fabric Engine rather than, say, C++, to write software for games development?

It depends on what they're building. We provide a scenegraph and many other elements required to build useful tools. Fabric is as fast as C++, yet any developer can use it – given that many pipeline tools are written using Python, it's a lot easier to



Games developers will be able to use Fabric Engine to improve their games' various characters

introduce Fabric to a TA or TD than to get them to write C++.

Fabric Engine was designed for performance and ease-of-use from the outset. This means that we provide the performance that modern production tools require. Our goal is to allow studios to work at real-time frame rates, even when working with very heavy data – in terms of both volume and complexity.

We provide all of our code to our customers – we recognise that studios often have developers that know perfectly well what they want to achieve. We designed Fabric Engine to be modular so that developers can change any part of it – from the rendering right down to how it handles multi-threading.

Fabric Engine was designed to be easily extensible – in particular, we make it easy to integrate with existing libraries. This allows us to provide support for data formats like Alembic, Collada and FBX. Beyond that, it also means that we can support libraries like Bullet Physics and work with streaming data from motion capture devices.

So are you trying to enable developers to replace some of the content creation tools that exist out there?

No. Fabric is complementary to existing content creation applications. With Fabric Engine we're trying to replace the need for bottom-up custom development.

Applications like Max and Maya are well established and people work with them every day. Fabric Engine is built to allow smooth interop with these existing tools. We aren't introducing new formats or anything that would increase pipeline headaches. There are many tasks that the established tools do not do well, where customisation is required.

For all of those tasks Fabric Engine is the perfect fit.

> ***"We enable developers to focus on building the tool they need, rather than spending time on architecture and plumbing."***
>
> Paul Doyle, Fabric Engine

Can you give some examples of what a games developer might use Fabric Engine to create?

Fabric Engine is capable of taking on most compute-bound problems – particularly heavy 2D and 3D processing.

We have built a few samples showing use cases from character rigging through to crowd simulation and image processing. We've developed a number of examples, which can all be found on our website.

For games we have some ideas around solving the headache of getting a good character pipeline going.

We believe that tools need to be built back from run-time, rather than the prevalent approach of exporting data from a DCC tool and dealing with all of the pain that comes with it.

Fabric Engine is well-suited for building this kind of pipeline tool.

Could we dig into the technical details a little bit? How do the high-performance bits of Fabric Engine work?

The high-performance parts of the application are usually described as a dependency graph – so written in Python or JavaScript – which describes task and data (SIMD) parallelism at a high-level. The operators on the graph nodes are written using a domain specific language, called KL (Kernel Language). KL provides features that are needed for high-performance code. We then take this description and Fabric compiles it on target using the LLVM compiler.

There's a great deal of diversity of developer make-up and size in today's games industry. What kind of studio is Fabric designed for?

Essentially any development studio can make use of Fabric Engine. Larger projects tend to have greater demands for custom tools, but it really depends on what the studio is trying to achieve. A TA or TD can take Fabric's existing examples and work from there, or an engine programmer can delve much deeper into our technology.

How does the open source licensing model you offer work?

The core of Fabric Engine has been released under the AGPLV3 Open Source Licensing Agreement, which means that developers can download and start working with Fabric Engine free of charge.

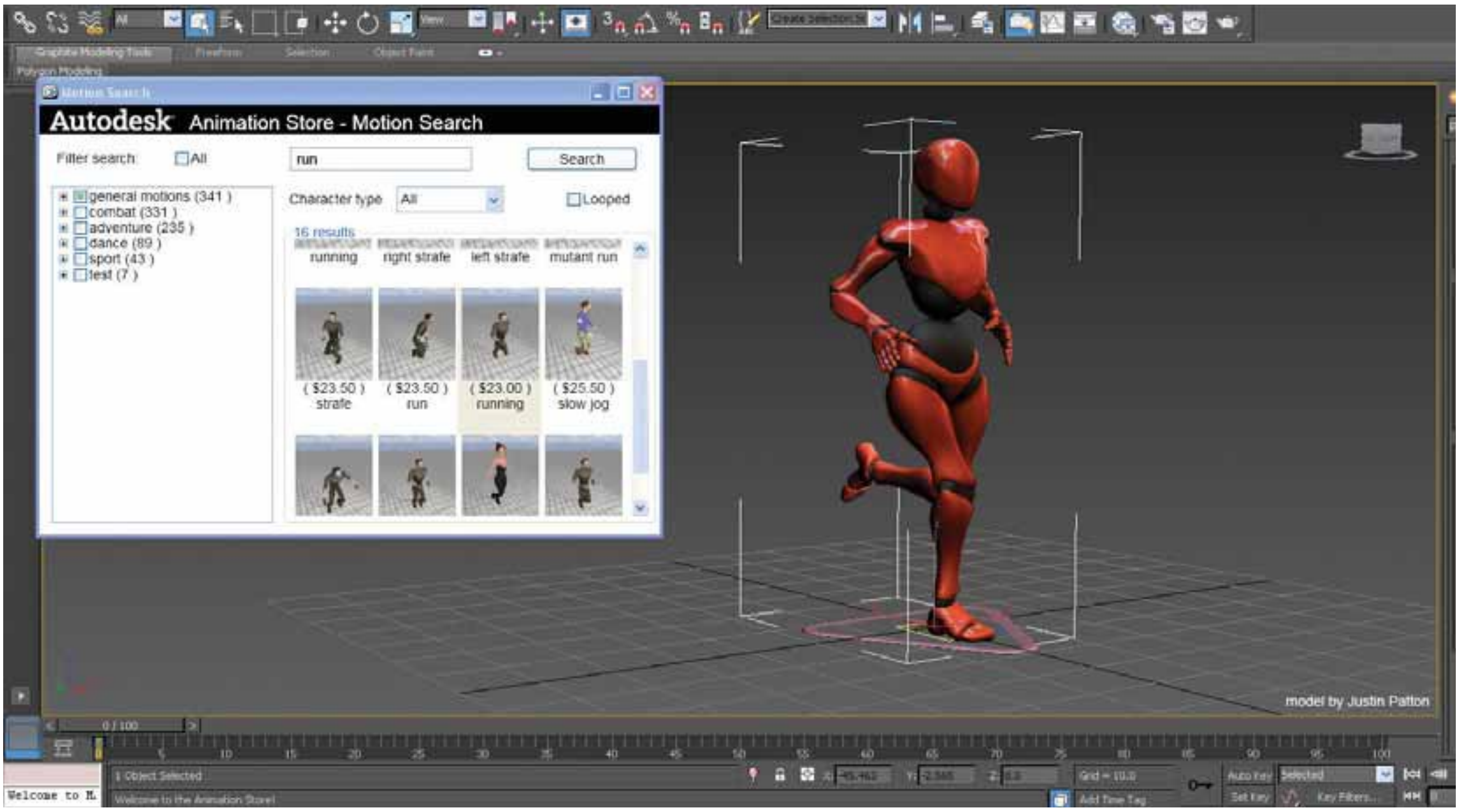
Additional technology like our PyQt framework and scene graph are commercial products that we license separately.

www.fabricengine.com

KEY RELEASE

Will Freeman uncovers the workings of Mixamo's new Autodesk Animation Store

WHAT IS IT? A new animation asset store within Autodesk's 3ds Max
COMPANY: Mixamo
www.mixamo.com



Filter search: ☐All run

Character type: All

model by Justin Patton

Mixamo's CEO Stefano Corazza (above) says the Animation Store offers users a chance to spend more time applying artistic style and less time developing technically accurate cycles

THE RECENTLY RELEASED 2013 iteration of 3ds Max introduces the new Autodesk Animation Store, which provides developers with a vast collection of rigged characters and thousands of animations.

Powered by online animation service outfit Mixamo, the Autodesk store content can be automatically applied to any biped and CAT-rigged character, offering a streamlined animation workflow well-suited to today's greatly varied range of games development studio models.

"Users simply select their character, choose an animation, and download it immediately onto their character all from within 3ds Max," says Mixamo's CEO and co-founder Stefano Corazza of the animation store's key selling point; its simplicity.

"Mixamo's dedicated R&D and engineering team designed and built the store for 3ds Max with the support of Autodesk's engineering and testing teams," He adds.

ON THE FAST TRACK

Within Autodesk's famed tool, as well as as a service in its own right, Mixamo's automatic animation service strives to drastically speed up the flow of 3D animation pipelines – apparently processing workload at five-times the pace of other existing methods, saving towards 70 per cent of cost.

"Animators can download animation onto their characters and tweak the animation data even further using layers and keyframe in 3ds Max," explains Corazza of the store's process. "This allows the animator to spend more time applying artistic style to animation and less time developing technically accurate cycles. Many teams find that the animation provided by Mixamo is production ready for their characters."

> ***"Users simply select their character, choose an animation, and download it immediately onto their character."***
>
> Stefano Corazza, Mixamo

Motion clips in the store can also be customised in real-time and previewed for no charge in the 3ds Max scene, so users can rapidly test multiple animations on any given character, allowing them to see how the motion will perform before making a purchase. With the clips bought, users can then take advantage of 3ds Max Software's support for animation layers to non-destructively edit the animations as needed.

Maximo's new collaboration with Autodesk also see's the former's offering subtly tweaked and refined to fit the Animation Store. Hundreds of specially rigged 3D characters are available both free and for purchase at the front-end, having been designed by world-renowned modelling professionals, while the back-end has been polished to provide a purely automatic animation pipeline for CAT and Biped rigs, ensuring an experience that promises to be both robust and seamless.

A LASTING RELATIONSHIP

Mixamo's partnership with Autodesk in fact reaches back to the animation service company's foundation in 2009. Back then Corazza and his colleagues worked closely with the Autodesk tools team to ensure that Mixamo's 3D animation services work seamlessly inside the Autodesk suite of creative products. And it was that history that inspired a deeper integration that the organisations are sure will be beneficial to both Mixamo and Autodesk customers.

And there's a wider opportunity that could see Mixamo's service used by more creative studios from outside games development, or with those that combine making games with other mediums.

"We see direct applications of the Autodesk Animation Store for broadcasting, architecture, 3D training, and pre-visualisation professionals," explains Corazza. "3D modellers can also use Mixamo's Auto-Rigger plus Auto-Biped/Auto-CAT scripts along with the Animation Store to create rigged, animated versions of their 3D models in minutes. The Animation Store is useful for virtually anyone using character animation inside their project."

With more partnerships between the two outfits in the future a distinct possibility, it seems the Autodesk Animation Store is just the beginning for the team at Mixamo.

EPIC DIARIES

Mark Rein looks at how 2K Games breathed new life into XCOM with UE3

Nearly two decades after the original *XCOM* captivated PC gamers around the world, publisher 2K Games and developer Firaxis plan to introduce the critically acclaimed franchise to an entirely new generation.

According to Jake Solomon, lead designer on the new title, game industry legend Sid Meier is working closely with the team to bring this unique blend of tactical strategy and action to life, which marks the first time Meier's studio is leveraging Epic Games' Unreal Engine 3 technology.

"Honestly, it was a thrill to work with Unreal Engine 3," says Solomon. "In-house, we've always used our own tech because of the games we've made before. This was the first game where it made sense to look at a licensed engine. Once we explored the technology and saw what it was capable of, it has just been such a blessing."

Set in a retro-future 1960s Earth, *XCOM: Enemy Unknown* is a turn-based strategy game that pits the player and their troops against an alien invasion of Sectoids. Every decision a player makes is crucial during gameplay, as once a soldier dies they cannot be revived. In addition, the player's research undertaken during the course of the game has a direct impact on repelling the aliens – and there is a real possibility of the aliens succeeding at the game's end. To achieve a sense of life-or-death consequences, Firaxis designed a series of cinematics to add another layer of storytelling to the game.

Almost two decades after the original XCOM, UE3 is making sure the series' next outing is a technological triumph

CINEMATIC FOUNDATIONS

"We used Matinee pretty heavily in *XCOM*," reveals Solomon. "That's our foundation for all of the cinematics you see in the game. UE3 was essential in allowing our artists to create content in a mature tool chain like that. Our programmers were also able to tap into this tech; it certainly helped with the development of three SKUs across PC, PS3 and 360. The ability to build off of a mature engine like UE3 has made it pretty easy."

Solomon said that due to the gameplay style, his team wasn't able to prototype in a day like many shooter teams, but the process was still faster than if they had grown their own tech. Firaxis was also able to seek guidance from other internal game studios.

"So many of the people within our publishing label have UE3 experience, so we have resources within our label that we can reach out to," states Solomon. "Industry-wide, you can't throw a rock without hitting somebody who has UE3 experience. We also used the Unreal Developers Network, which has been a huge help."

From a visual standpoint, the new game taps into the full capabilities of Unreal Engine 3. To achieve the look and feel they wanted, Firaxis created a global landscape for players to engage in, complete with recognisable landmarks. Solomon said that all of the maps were hand-built, including the more regionalised maps, and these encompass both outdoor and indoor maps. Additionally, the player can play in urban areas as well as wilderness areas, where they shoot down UFOs.

APPETITE FOR DESTRUCTION

"From a technical standpoint, I'm most proud of our destructible environments," says Solomon. "That's something that you still don't see a lot of. But it's really fun to use in our game, since it's a tactile experience. For example, blowing out a wall completely changes the tactics involved in a level and this creates a dynamic battlefield to play in."

Also playing into this gameplay experience are new aliens conjured by the Unreal Engine 3 toolset from the imagination of Firaxis. Solomon said enemies like the Berserker can literally run through walls. This opens up interesting immersion gameplay, coupling varying Sectoids with weapons that can change the playing field in an instant. Solomon said UE3 enabled his team to create complex levels and craft intelligent enemies that fluidly run on AI that constantly adjusts to the dynamic surroundings.

"I'm extremely happy with the new 3D base that we've created in this game," said Solomon. "Being able to show all that level of detail when you're zooming in to see the different soldiers and all the units, that's something that my team just did an awesome job with, technically."

And that level of detail, and deep gameplay experience, was brought to life using Unreal Engine 3. Soldiers new and old will be able to engage in battle against a challenging alien invasion in this new take on squad-based tactical action in *XCOM: Enemy Unknown*.

UPCOMING EPIC ATTENDED EVENTS:

E3 Expo
Los Angeles, US
June 5th - 7th, 2012

GDC Europe
Cologne, Germany
August 13th - 15th, 2012

Please email: ***licensing@epicgames.com*** *for appointments.*

To discuss anything raised in this column or general licensing opportunities for Epic Games' Unreal Engine, contact: **mrein@epicgames.com**

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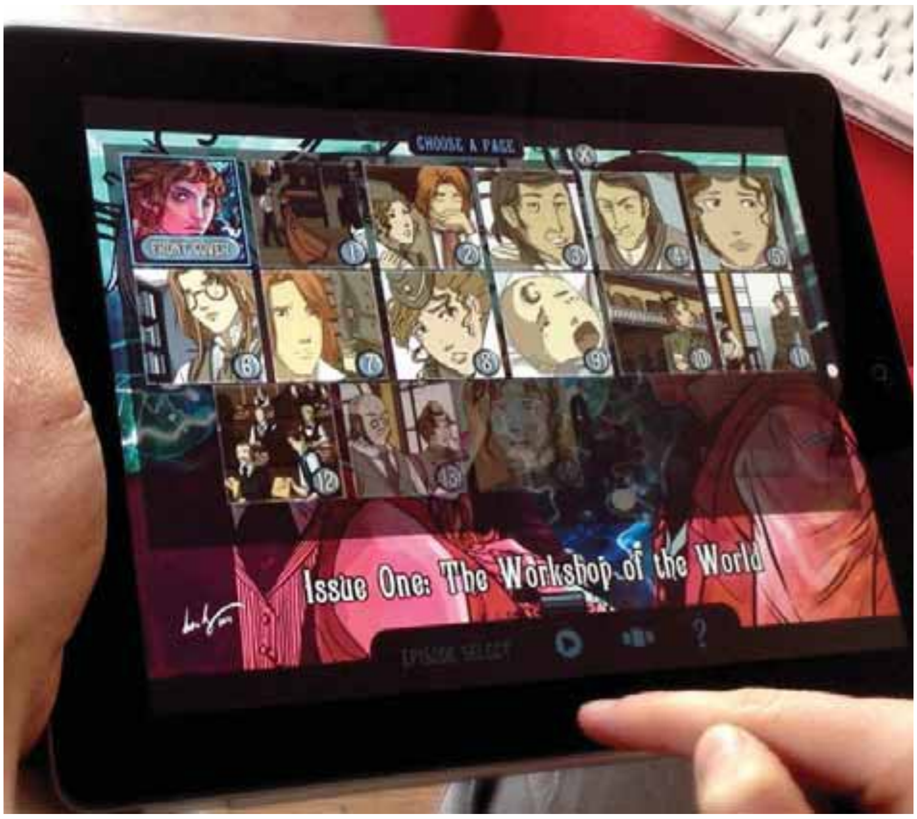
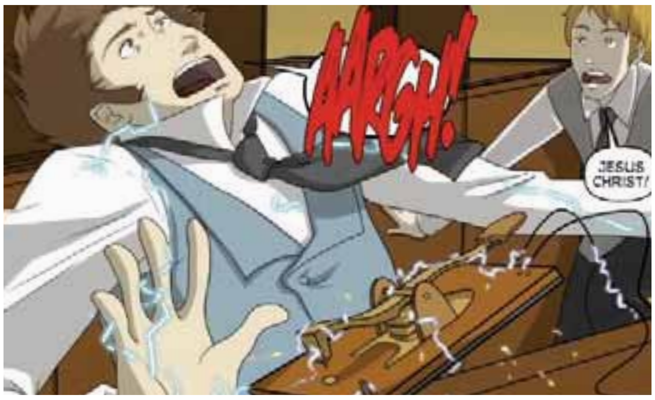
Canadian-born **Mark Rein** is vice president and co-founder of Epic Games based in Cary, NC. Epic's Unreal Engine 3 has won *Game Developer* magazine's Best Engine Front Line Award five times along with entry into the Hall of Fame. UE3 has won four consecutive *Develop* Industry Excellence Awards. Epic is the creator of the mega-hit *Unreal* series of games and the blockbuster *Gears of War* franchise. Follow @MarkRein on Twitter.

UNITY FOCUS

Littleloud proves that Unity is perfect for more than just traditional games

THE THRILL ELECTRIC
Developer: LittleLoud
What is it? An 'enhanced digital comic' that has leapt from browser to iOS
www.thethrilleletric.com

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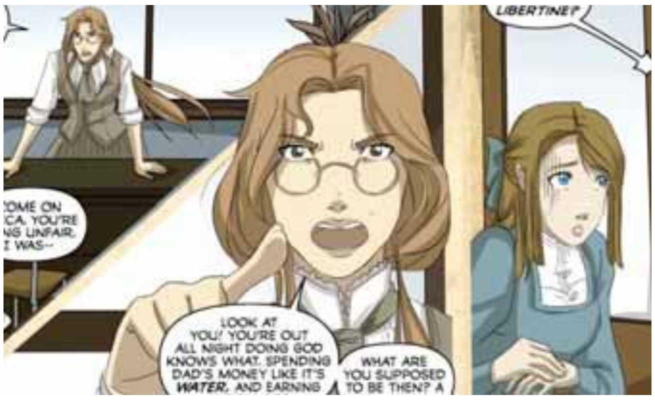
LIBERTINE?
OME ON CA. YOU'RE G UNFAIR. I WAS--
LOOK AT YOU! YOU'RE OUT ALL NIGHT DOING GOD KNOWS WHAT. SPENDING DAD'S MONEY LIKE IT'S WATER. AND EARNING A
WHAT ARE YOU SUPPOSED TO BE THEN? A

Littleloud's Darren Garrett (middle) and Iestyn Lloyd (above) chose Unity for The Thrill Electric as they felt it was able to handle its large and complex series of interactive comic book pages

UNITY IS OF COURSE a games engine, but every now and then it's used for a project that pushes the boundaries of what a 'game' is, and what the technology can do.

The Thrill Electric by studio Littleloud is a perfect example of such a creation. Effectively a digital comic with a soft sociological commentary and educational leaning commissioned by UK broadcaster Channel 4, it is the creation of a collective from a range of disciplines.

"The original idea was developed by Jonathan Davenport and Andy Mettam of Hat Trick Digital," says Darren Garrett, Littleloud's founder and creative director. "They had been developing the story with the writers, John Reppion and Leah Moore, and the artists, Windflower Studios. They knew it was going to be a digital comic, which is the point when we met up. With over 35 years of collective comics knowledge in the office, along with technical and storytelling expertise, this project fell squarely into our remit."

Setting out to better the existing 'motion comics' – which in essence animate the traditional graphic narrative while respecting conventions of storyboarded fiction – Littleloud and its collaborators came upon the idea of having each comic panel divided up into separate planes to create a level of depth and movement. The reader, they decided, should be able to pan over those elements to get a subtle sense of immersion and direction in the game.

Immediately as the team had zeroed in on this core idea, it became apparent Unity was the ideal tool for the job.

POWER TOOLS

"We'd previously used Unity for creating cross-platform content for Paramount and Marvel, so we were familiar with Unity," explains Littleloud technical director Iestyn Lloyd. "Having spent some time on researching Unity's capabilities for larger projects, we felt that it would be able to handle what we wanted to throw at it."

And the team had plenty to pitch at Unity. Namely 150 pages of multi-layered comic in 3D space, with almost 3,000 high quality textures, supported by a wealth of additional 3D animations, audio, and video.

> ***"File size on the web was a concern but Unity's built-in compression and streaming of scenes dealth with this problem."***
>
> Isetyn Lloyd, Littleloud

"We had to have a certain amount of faith in the engine of choice, as we weren't aware that a similar project on this scale had been attempted on any engine," continues Lloyd. "Fortunately we had first-hand experience of the excellent technical support the Unity team offers, so we knew that if we hit any major obstacles we'd be able to find a solution."

Of particular use to the Littleloud staff was Unity's ability to script the IDE.

"I was able to write scripts and tools to automate a substantial part of the workflow, saving hundreds of man-hours throughout the lifetime of the project," says Llyod. "Other than that, being able to debug the comic at runtime using the IDE and changing values in real time was a huge time-saver."

EXPENSIVE THRILLS

Of course, making *The Thrill Electric*, which has just been released on iOS after receiving much acclaim as a browser title, wasn't without challenge. With those 3,000 high quality textures and numerous other assets coming in at 10Gb in original file size, and the need to batch process huge amounts of that data inside Unity, Littleloud's project was potentially hugely costly on memory supplies.

"While file size on the web was a concern, Unity's built-in compression and streaming of scenes dealt with this problem perfectly," states Llyod. "However, getting thousands of high quality textures onto mobile was a different story. It took some time to figure out where we could use different compression and optimisation techniques to make sure we could get a good experience on both iPhone and iPad."

Fortunately, thanks to the efforts of the Unity support team, and the infamous quality of the engine's profiler, *The Thrill Electric* has made it to iPhone and iPad; the latter being a platform Littleloud is convinced is a perfect place to build the foundations of the future of digital comics.

Working together with their collaborators, Unity and Littleloud have done much to strengthen the bridge that links the mechanics of comics and games, creating an opportunity many other devs may be keen to emulate.

HEARD ABOUT

John Broomhall looks at the role the film composer can serve in the games industry

Composition in games
Service: The Gorfaine/Schwartz Agency
Platforms: Multi-platform
www.gsamusic.com

THE GORFAINE/SCHWARTZ AGENCY, widely recognised as one of the entertainment industry's pre-eminent organisations for representing music talent, boasts a star-studded movie and TV composer roster featuring such luminaries as John Williams, James Horner, and Thomas Newman.

GSA talent agent since 1993 and pioneer of an interactive division, Cheryl Tiano describes her role as "representing extraordinary composers for all forms of visual media".

"I believe interactive entertainment is the medium of choice for the 21st century," says Tiano. "When it was first made known to me I became very intrigued with the world of games and found it consisted of some of the most interesting, intelligent and creative people I have ever known. I became really passionate about it and decided that, in addition to film and television, interactive media should be a major focus for our agency. It's now an incredibly significant part of our business.

WELL COMPOSED

"In games, I generally see composers being treated with an enormous amount of respect and often afforded a great amount of creative freedom," Tiano continues. "I would say that's why a lot of our composers who write for films want to score games, because they enjoy the process. And the people they're dealing with are often very creative – it's an amazing collaborative experience.

"One thing I find really wonderful is how, to the person that's playing the game, the music is such a rich part of the experience. They're hearing the music over and over unlike with a film where you hear it once. It's very much a part of the games players' lives."

Cut back to the mid-to-late nineties, and many in our industry still yearned for a coming time when the choice of composer would be not so much who could we afford, but who would we like – who we felt was best for the job at hand. Now we've been here a while and have found that 'who would we like' and 'who is best for the job' can sometimes prove to be fundamentally different concepts.

Most long-in-the-tooth game audio professionals can cite their own distressing yet amusing stories of misguided executives trying to effect and even force horrible mismatches of composer to game, based purely on personal preference or marketing considerations – like the drum and bass DJ who would be 'perfect' for our new kids' cartoon RPG title (plus we can hang out and he can autograph my stuff).

However, for most informed professionals, who they would like is, of course, who would be best.

The fact that such a mighty talent bastion as The Gorfaine/Schwartz Agency has its gaze so determinedly set on video games is a clear indicator of just how far we've come over the last ten or so years. Music score is widely, and rightly, recognised as a hugely important contribution to the overall play experience, and in many cases, budgets no longer preclude film talent and orchestral recording. This is even to the extent of enabling some notable willy-waving – 'we're so big and successful, we hired so-and-so big name who wrote the music for all these massive movies.'

> ***"One thing I find really wonderful is how, to the person playing the game, music is such a rich part of the experience."***
> Cheryl Tiano, Gorfaine/Schwartz

SOUNDS FAIR

Perhaps that's fair enough, and in one sense, it is impressive. After all, plenty of film composers who may never have touched a game controller have written very effectively for video games - often with excellent support and guidance from a point person in the developer or publisher's domain who is taking the role of 'music supervisor'. And judging from those film composers for games I've interviewed, it's generally a very positive experience creatively for them, and a world away from feeling painted into a compositional corner by temporary music tracks edited into a working version of a movie.

However, hearing the music over and over unlike with a film where you hear the music once is just one factor that marks games apart from moving pictures – even for so-called cinematic games. This aspect alone may require a different mind-set and approach – and even a different or specific additional skill-set. Many of our most celebrated so-called 'game composers' bring all the raw composition chops and technical/production expertise of a film composer, plus a hugely valuable deep cultural knowledge of games and many key insights about gameplay. This works together with the refined ability to write so-called 'interactive music' in relatively unintuitive structural forms, always with a weather eye on how their output will work alongside the game's sound and dialogue components during many hours of repetitive play. Most are avid gamers themselves and arguably, that makes a real difference.

Can someone who writes music for films 'get it'? Absolutely. Specific artistic sensibilities, interactive composition, production expertise and cultural understanding aren't unique to some game music Illuminati. But, for a great game score, they are surely required in the talent mix somewhere. In some instances this is achieved by additional music expertise within the dev team – persons present with the skills to articulate a clear vision and technical delivery method to a composer who has possibly never even thought outside the linear box.

Alternatively, you could just hire a composer who has been around our unique and fascinating block several times, having written music for multiple video game titles.

Perhaps that's why Gorfaine/Schwartz' Cheryl Tiano just signed up a clutch of distinguished UK 'games' composers?

The Gorfaine/Schwartz Agency's Cheryl Tiano (Above) believes composing in the games industry is an especially collaborative process. (Top) Composer Jason Graves conducting

John Broomhall is an independent audio director, consultant and content provider.
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The world's premier listing of games development studios, tools, outsourcing specialists, services and courses…

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Futureworks in focus

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Recruiter Hot Seat

We ask Rebellion's **Claire Timpany** how job seekers can better their chances of finding employment at the studio

BIO
Name: Claire Timpany
Title: Recruitment manager
www.rebellion.co.uk

What makes Rebellion different from other companies?
We're an independent, privately owned developer, so we don't rely on any one particular publisher and can publish our own IP. With our own in-house multi-platform engine we're technologically independent too.

Both these main factors contribute to our worldwide reputation for innovative products and general success – at the end of 2012 we will be 20 years old; not bad for an independent studio.

We make games that range in scale, from *Sniper Elite V2*, a triple-A title on multiple platforms, to smaller games made with smaller budgets, but with just as much innovation in them, like *Judge Dredd vs Zombies*, a free-to-play title available on the App store. Of course Oxford's a pretty nice place to have our headquarters too and it doesn't hurt that our IP includes sci-fi comic *2000AD*.

As an already large studio, how many staff are you looking to take on?
We're looking for the right combination of skills amongst our teams rather than filling a set number of places. This always varies according to our current project needs. However, mobile and social games are now our fastest expanding areas since branching out from PC and consoles to other formats. It's nice to be doing something new.

We're also always willing to look at speculative CVs from direct applicants. We've picked up a lot of new talent that way and you never know what's coming up in the near future that we're not yet advertising for. For specific roles we've recently revamped our website to include all the information needed.

What disciplines are you currently looking to recruit in?
With our diverse portfolio of projects and formats we usually have quite a wide variety of roles available, but in particular we've recently increased our needs in web technology.

This is a newer area for us so while it's been a great opportunity for some of our staff to try something new we also want to bring in more skills from outside. It also means we have an additional focus on GUI at the moment. Strong C++ coders are always desirable too, as our engine is ever-evolving.

Who is the best interviewee you have had and why?
My favourites are usually confident and honest about their abilities, and able to demonstrate these and talk about them. Of course, the best interviewees are those who reveal skills we didn't even know we needed, where during the interview it becomes clear that as well as being a great fit for the job spec, the person will bring many other benefits to their team and Rebellion overall.

It's hard to define but if someone spends a lot of the interview explaining how they could improve quality and efficiency and so on then

GET THAT JOB

HR specialists offer advice on how you can score that promotion

THIS MONTH: ANIMATOR

"When we're recruiting for someone to join our animation team the show reel is crucial in getting beyond the first stage. It is not unusual for us to look at over 100 show reels for one position, so it is important that yours does its job.

"We only want to see what you think is your best work in your show reel. 30 seconds of impressive work is far better than four minutes of work that dips in quality.

"It's also important to remember that we're judging your animation; to us it really isn't important how it is rendered out. Show off that you understand the basics of animation and remember that we're making video games. It's important we see body mechanics, in particular walk and run cycles."

Kelly-Ann Hogger,
HR Advisor, Ninja Theory

SIX-SECOND STUDIO SPOTLIGHT

- *Kwalee was formed last year in* Leamington by Codemasters co-founder David Darling
- The app specialist has since been joined by David's father Jim Darling as the studio's chairman
- The studio focuses on mobile games development, releasing titles such as *GoBang Social* for iOS
- The developer currently employs 15 staff, but is looking to rapidly increase its size in the near future to work on multiple titles
- Kwalee is looking to take experienced console programmers who know C++ and then teach them to code for mobile
- The studio has 'creative Wednesdays' each week where staff are encouraged to work on their own projects

that's a good sign. New approaches are always welcome.

What was the worst interview you've had?

People that are too quiet and need too much coaxing to tell us about themselves can be difficult – your interview is a chance to shine in comparison to other people so try to elaborate on your answers if possible. It's normal to be nervous but try to relax, take your time and show off your knowledge.

And for juniors don't forget to show passion and interest in games as a career – we do want to know what you're playing at the moment.

What tips can you give job-seekers looking for a successful interview?

Be prepared – expect to be asked standard questions such as why you want the job and what you can bring to Rebellion. It might seem obvious but it's something we're interested in so it is good to be prepared for standard questions like these.

Don't over or underestimate yourself – if you set yourself up as an expert in a specific area or skill then you should be able to answer detailed questions about it. However if you don't tell us you can do something better than average then we won't know.

Be engaging – an interview is a two-way process between you and your interviewers. It's your opportunity to show off your knowledge of Rebellion as well as asking questions about what it's like to work here.

Be passionate and interested – we like people who are keen, self-motivated and, of course, have a genuine interest in games.

Given the well-documented troubles of the UK games industry, why should developers opt to stay in the country?

With the recent win for Tiga's campaign to get tax breaks for large and small development projects, this is likely to change very soon and we expect to see a positive move forward for the industry.

And, of course, we are very keen for people to continue to support independent developers in the UK in general. It's great to be part of something where you as an individual can make a difference to British games that sell worldwide.

> ***"We like people who are keen, self-motivated and, of course, have a genuine interest in games."***

Does the relatively large size of Rebellion make it more difficult – or in fact easier – to recruit for the studio?

Both I think. Being large means it's easier for people to hear about us and it's nice to be able to have our pick of the best applicants.

However I do sometimes worry that people may start to see us as more of a corporate company turning out big titles like *Sniper Elite V2,* and forget that as an independent developer we are always trying something new and still have a number of small multi-disciplined teams.

NEW STUDIO ALERT!

AFTER THE FAMOUS UK developer left Lionhead and Microsoft after 15 years, Peter Molyneux has set up new studio 22Cans. The industry icon says the studio will focus on three philosophies for its first game: multiplayer connectivity, access for all users and an endless gaming experience.

Molyneux is looking for 22 staff – some from a variety of different professions – to help achieve his ambitions, and hopes to have a full studio by the end of the year.

"If we wrap all those 22 people together, around this great, crazy and highly ambitious idea, and we sit down and experiment and innovate and play that idea, then maybe we can make something that can change the world," he says.

MOVERS AND **SHAKERS**

This month: Amiqus Recruitment, Team 17, Ripstone, The Creative Assembly and PlayJam

AMIQUS ■ Amiqus Recruitment has hired two new employees to help developers find jobs in the industry. Business Studies graduate **WILL HUDSON** has been recruited to engage with 'hard-to-find' candidates with 'rare technical and non-technical skills'.

MORGAN DAVIES has been appointed as senior games consultant, and will be responsible for partnering with the company's existing clients, as well as developing new relationships across Europe.

"This year we have expanded our business to create real focus on each area of the games industry, including console, publishing and the rapidly developing social and mobile games space," says Amiqus head of games recruitment teams Stig Strand.

TEAM 17 ■ Yorkshire-based developer Team 17, most famous for the *Worms* franchise, has welcomed back the game's original creator **ANDY DAVIDSON**.

Returning after 14 years away from the games industry, Davidson will help support the release of *Worms Revolution*, which has been designed to be a new take on the classic series.

"I left Team17 feeling I hadn't finished what I wanted to achieve, but for professional reasons I knew I had to walk away", said Davidson.

"I've returned to scratch the creative itch that's been bothering me for the last 14 years. It's nice to be back at Team17. It's as though there's been a revolution in the studio itself."

RIPSTONE ■ Independent digital games publisher Ripstone has been on a busy recruitment drive, hiring four new members to its team.

Former Disney Interactive Studios Europe PR exec **MICHELLE SENIOR** (*second right*) has been appointed as new global PR and marketing manager. She will be tasked with all corporate and consumer-based PR for the company. **STEPHEN GRIFFITHS** (right) meanwhile has been appointed as senior producer, having departed from SCEE.

A former games tester at Rockstar Games in Lincoln, **ROGAN OGDEN** (left) has been hired as assistant producer, whilst **NATALIE WILLIAMS** has been recruited as publishing assistant, having previously worked within the music industry.

"We've strengthened the Ripstone team with young, dynamic talent, which is something we feel especially passionate about, and something we will continue to do," said Ripstone creative director Phil Gaskell.

THE CREATIVE ASSEMBLY ■ *Total War* developer The Creative Assembly has hired a new talent acquisition manager to lead the studio's global hiring campaign and develop its employment brand.

ALEX WRIGHT-MANNING has left his post as senior acquisition consultant at Datascope to join the studio, having also worked at games recruitment business such as Creative Personnel and Mortimer Spinks.

"We have extensive plans to expand the studio in the coming years, so I'm hoping I can be an integral part of that growth, and help to further establish The Creative Assembly as not only one of the best studios in the world, but also as one of the best places for elite games developers to develop their careers."

PLAYJAM ■ The BBC's head of TV business development has left the media giant to take up the role of chief commercial officer at TV games specialist PlayJam.

CHARLES TIGGES, who has also previously worked at BskyB as senior portfolio manager, helped drive smart TV projects such as BBC iPlayer.

"It's great to see the teams that defined the first generation of Smart TV are moving on to shape the next," said PlayJam CEO Jasper Smith.

"Charles has an in-depth understanding of the industry and an enormous respect within it; we are pleased to welcome him to the PlayJam team where he will play a central role in shaping the future of games on TV."

SERVICES SPOTLIGHT

This month: **Dimensional Imaging**

FORMED IN 2003 and originally offering services for research applications, Dimensional Imaging has gradually entered the games industry over the past few years, providing developers with on-location facial performance capture services.

As part of this service, the company provides developers with a mobile rig of synchronised hi-res digital video cameras running at 50fps or 60fps, and video lighting to capture facial performance in minute detail.

"We use our own proprietary software to process the captured video streams to recover a dense '3D scan' per frame and then 'shrink wrap' a template mesh supplied by the client onto the 3D scan data, and track every vertex of that template mesh through the sequence," explains the studio's CEO Colin Urquhart.

"This tracking stage is important because it is essential to provide a consistent mesh topology so that it can fit easily into facial animation pipelines. We provide the data as point cache plus normal map and texture map per frame."

The Scotland-based company's first project was working with neighbours Axis Animation on the infamous *Dead Island* trailer. Originally intended as just a test with Axis in using traditional optical marker-based facial mo-cap for the project, Urquhart says the studio liked the services so much, it decided to use them for the trailer instead.

As well as working with Axis, Dimensional Imaging has also worked with EA, with its software used to capture player models for *FIFA,* while Valve has also used one of the company's systems to capture facial blend shapes for its critically acclaimed *Left 4 Dead 2*.

Urquhart says that motion capture is becoming increasingly important in gaming, and the level of realism involved in animation before it crosses the so called 'uncanny valley' is constantly pushing boundaries. He also insists there is more need for more cost-effective solutions as prices rocket.

"Improving the realism of facial animation without blowing the whole budget is a big focus for many studios and using advanced facial performance capture techniques such as Dimensional Imaging's is becoming an increasingly attractive option," he says.

As for the company's future, Urquhart says that Dimensional Imaging is looking to expand its facial performance capture service internationally, and will strive to make its mobile setup more readily available in countries outside of the UK, such as industry hubs in the United States and Canada.

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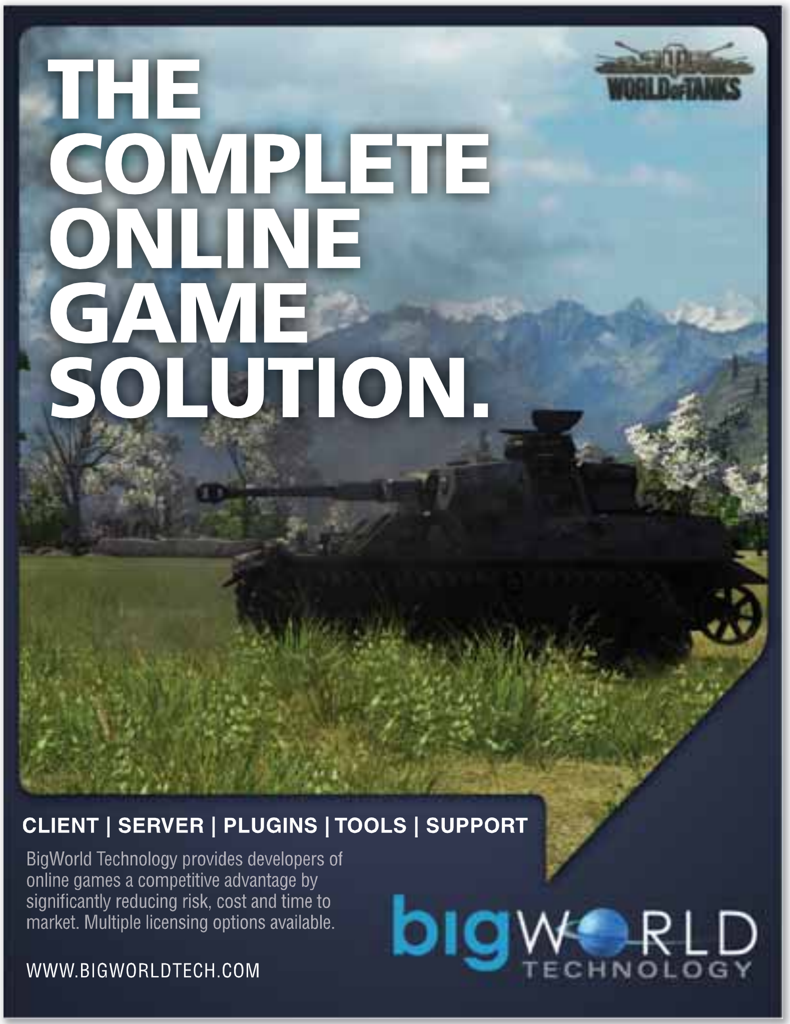
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TOOLS SPOTLIGHT

This month: **Luxology**

Luxology

LUXOLOGY, FOUNDED in 2001, is a company located in the famous technology hub at Silicon Valley, and is responsible for developing 3D content creation tool modo for game artists.

The firm recently released one of its biggest updates yet to the software, modo 601, which adds numerous new features such as built-in dynamics, volumetric rendering and enhanced reptology modelling tools, helping further create a full pipeline solution for artists.

Luxology's community director David Tracy says that the latest version of the tool has been a long time in the making, with the foundations already laid out in 501.

"Well I can say when we came up with modo 501, a lot of it was in preparation for this release," says Tracy.

"There were a ton of new features with 501, literally hundreds, but they were very small things, like speed improvements and speeding up the rendering engine capabilities, everything like that."

He adds that with 601, more than a hundred new features were included, with each one being a new addition, such as a full defomartion system and further expanding on its capabilities with topology, turning it into a fully fledged tool rather than taking tentative steps into the area.

Perhaps one of the biggest additions, however, is the inclusion of character animation tools that offer the ability to create fully articulated character rigs that can be manipulated through a full-body inverse kinematics solver and a system of layered deformers.

The tool has also seen the integration of Ikinema's Runtime tech to refinforce the software's new character animation setup by bringing rigging and interactive posing capabilities to the new tool.

Tracy says that he hopes that the latest release further helps game artists do their jobs, and not get bogged down by the non-creative aspects of their roles so that they can focus on creating content.

"One thing that we always look at is feedback from people in the trenches, and we always say that modo is for artists," he says. "There's so many tasks that you're doing day-to-day and you're always under a time crunch, and this is the stuff that isn't creative, it's not fun, you can't write this in one script that just does it magically.

"This actually gives people more time in their days to do more of the creative process, rather than having to think about having to draw polygons all day long. That is uninspiring in and of itself."

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TRAINING SPOTLIGHT

This month: **Futureworks**

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W: www.futureworks.co.uk

THE MANCHESTER-BASED Futureworks media school provides students with education in sound, music, film, games and 3D animation.

The games courses on offer for aspiring young industry professionals include a Foundation in Game Art, a Diploma in Game Development, Game Audio for Audio Engineers and a degree in Games Design.

"I would say that both the diploma and the degree are courses that would give students the skills and knowledge to move into the games industry as they are both substantial three year courses," says Futureworks head of games Ken Lau (*pictured far right*).

"The diploma is a part-time course taught on two evenings a week, which runs for three years, and the degree is more of a traditional full-time course. The Foundation in Game Art is a taster of the art pipeline for our students."

As well as these courses, Lau reveals that Futureworks is set to offer a Masters Degree in Games Design starting from September for those looking to expand their knowledge.

He adds that all of these programs are taught by a team of experienced tutors which he says are passionate about games, and keep classes small in size to allow teachers to work more closely with individual students.

"We get to know our students very well and can monitor their progress effectively because of this," he says. "We are agile and we can institute changes to the course delivery very quickly enabling us to monitor and modify our courses very effectively."

> ***"Both the Diploma and Degree are courses that give students the skills to move into the games industry."***
>
> Ken Lau, Futureworks

Two of the lecturers on the course have formed their own indie studios, and have also previously worked at companies such as EA and Traveller's Tales, whilst the school also has a professional illustrator to teach drawing skills and character design.

Lau also explains that a number of students have been able to take on work placements as well as internships at what he describes as a 'large north-west developer', whilst one former pupil has started his own company as a result of his experience at Futureworks. A team of students at the educational establishment is also entering Abertay's popular BAFTA-related student development competition Dare to be Digital.

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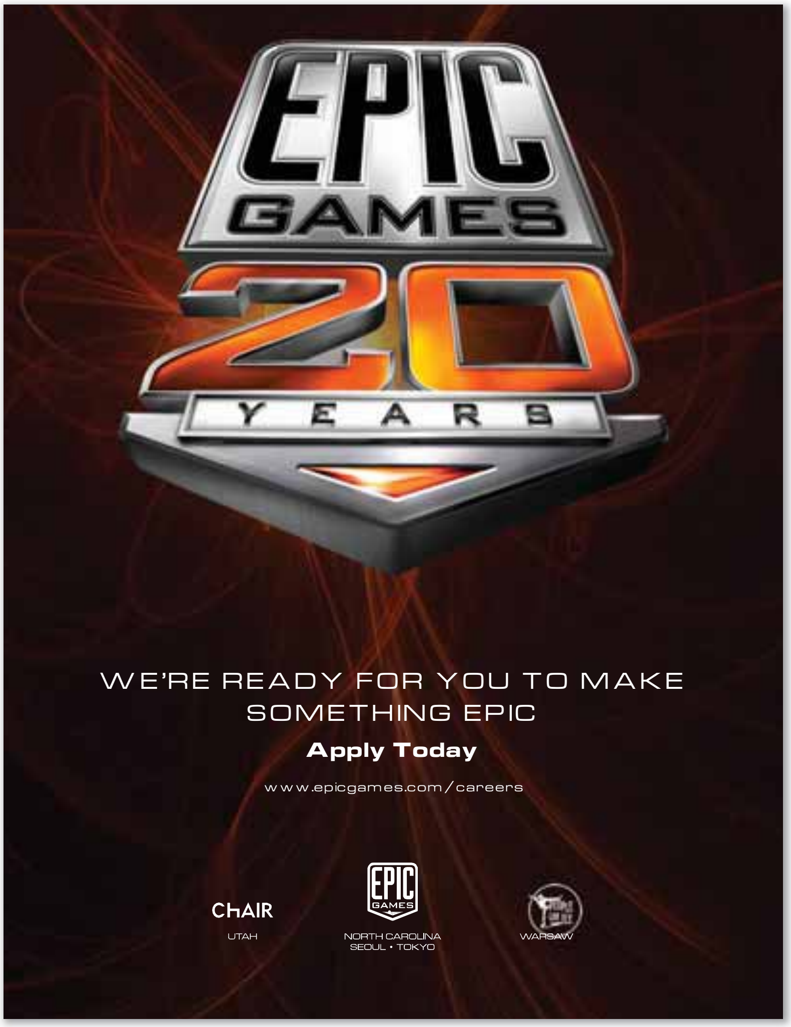

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Futureworks

Lau insists that one of the keys to the academy's success is that it keeps ahead of current developments in the industry so that students are fully prepared for life after education.

"We try to keep on top of current issues facing developers, and having tutors who are still in the industry gives us a real advantage," he says.

"It means that they are current with the latest trends in development so that should we need to change the make-up of our courses we are able to do so. We regularly review them."

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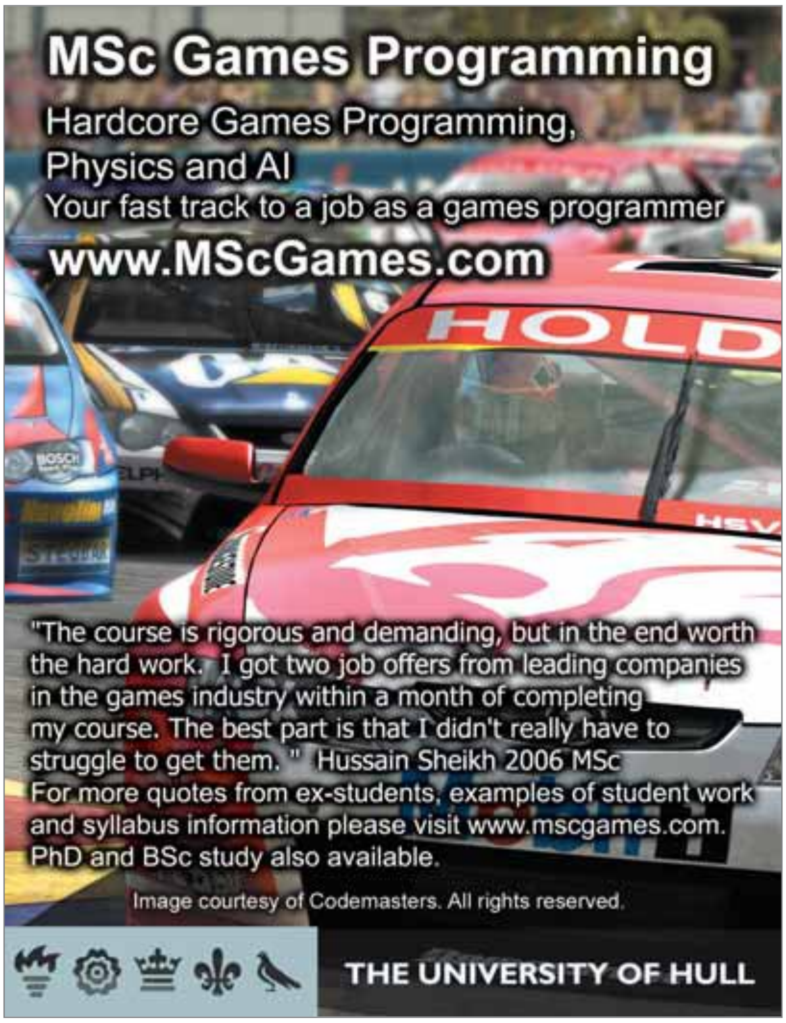

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For more quotes from ex-students, examples of student work and syllabus information please visit www.mscgames.com. PhD and BSc study also available.

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A sideways look at the games industry

THE INDUSTRY IN 140 CHARACTERS

A month in tweets by the industry elite

@MrPhilHarrison
Microsoft\office\start\day1

(Phil Harrison, Microsoft)
April 10th

@steishere
People who habitually hashtag apparently #random #words (and #compoundwords) will be #firstup against the #wall when I'm in #charge

(Ste Curran, Secret Crush)
April 18th

@JonTt
Great to see that LEGO is now the UK's 9th biggest video game franchise of all time, and we've only been making the games 7 years...

(Jon Burton, TT Games)
April 16th

@giordanobc
21% of the population is ready to do whatever a burning bush tells them to do. There's great potential for mischief there

(Giordano Contestabile, Popcap)
April 19th

@jmechner
Big sigh of relief that those 20-yr-old source code disks survived intact! We're not done yet though… #popsource

(Jordan Mechner, Prince of Persia creator)
April 17th

@milessi
Seeing as people pleaded with us to get FMH onto Android, I'm amazed at how pirated it is. Around 9:1. Dicks.

(Miles Jacobson, Sports Interactive)
April 20th

@br
I stare at level curves for hours.

(Brenda Garno Brathwaite, Lootdrop)
April 17th

@BenjaminCousins
Is there a rule at Vimeo that you need to use a short prime lens and wobble the fucking camera around all the time?

(Ben Cousins, Ngmoco)
April 24th

@therealcliffyb
I'M AT WORK BEFORE 9 AM
SOMEONE CALL KOTAKU

(Cliff Bleszinski , Epic)
April 17th

@Doctoe
Saving the Valve staff handbook for future ref.

(Jo Twist, UKIE)
April 24th

AN OPEN MIND

DAN PORTER

The omgpop CEO's comments on joining Zynga caused something of a stir. Of course they did. It's about Zynga

15% Temporary Insanity
17% Being sorry
68% Dissapointing employees

On Twitter, musing on success, failure, and his least favourite employees:
What's so interesting about success is the number of failures who try to ride on your back. Shay Pierce is just one of many…

Back on Twitter again with more to say:
The one omgpop employee who turned down joining Zynga was the weakest one on the whole team. Selfish people make bad games. Good riddance!

Returning to the microblogging site to apologise to the world for the comments:
I'm sorry for what I said on Twitter last night. No excuses.

Responding on Twitter to Markus 'Notch' Persson's suggestion Porter was an 'insane idiot' for the things he said:
"It's been the craziest ride. So yes, I may be temporarily insane. I just wanted my team who stuck with us to shine."

IT FIGURES :

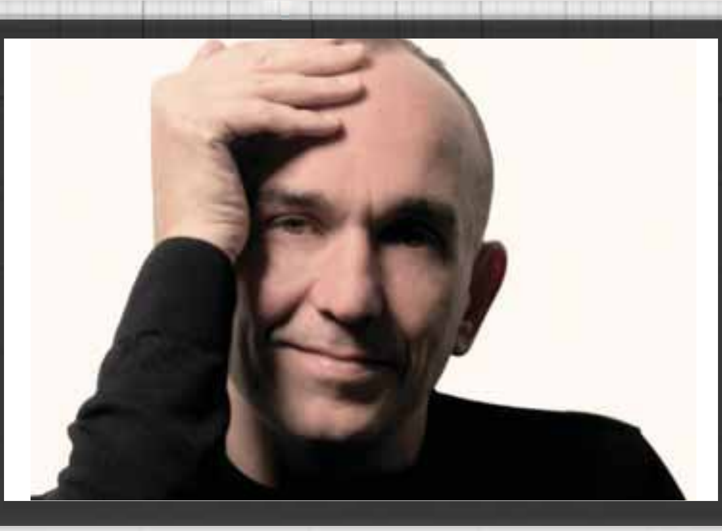
PETER MOLYNUEX'S 'EXCITING' MONTH

When Peter Molyneux left Lionhead in **March 2012** – which he co-founded in **1997** – it was clear that his next project would be popular. Still, when his new studio **22**Cans received **1,000** emails applying for jobs at the studio, Molyneux was unsurprisingly "excited".

With around **22** job openings available over the next **ten months**, it seems he'll have no problem filling the spaces. Still, it's taken the Fable creator some **16 hours** to sift through the emails to separate the good from the bad.

Molyneux's last day at Lionhead took place on **April 11th**. He also resigned from his position as creative director of Microsoft Studios Europe.

April also saw the Molyjam game jam take place, where **hundreds** of developers in **32** globally scattered locations made some **260** games based on the tweets of Molyneux parody account @PeterMolydeux in just **48 hours.**



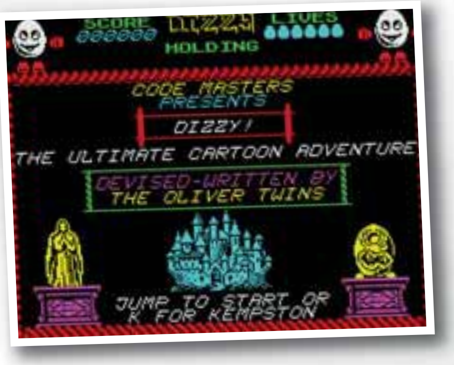
THE EGO TRIP

We ask some of the finest game development talent a series of questions about the toughest subject of all – their own work

PLAYERS
P AND OLIVER A
COMPLEX COMPUTER SOFTWARE
PHILIP & ANDREW OLIVER
EASYART

THIS MONTH: Philip Oliver
MOST FAMOUS FOR:
Being an Oliver Twin, and heading up Blitz Games Studios
ANSWERING QUESTIONS ON:
Dizzy: The Ultimate Cartoon Adventure

Can you name the month and year that *Dizzy: The Ultimate Cartoon Adventure* was released?
It's either '86 or '87, and I'm pretty sure it was in the summer. I'm going to say June '87.
CORRECT


SCORE 000000
LIVES
HOLDING
CODE MASTERS PRESENTS
DIZZY!
THE ULTIMATE CARTOON ADVENTURE
DEVISED-WRITTEN BY THE OLIVER TWINS
JUMP TO START OR K FOR KEMPSTON

Early in the game, Dizzy discovers the 'Avawiffovee potion', which obviously stops evil Wizards. As well as this it also cures an unpleasant medical condition. What was it?
I know that one. It's athlete's foot. Richard Darling actually came up with the name.
CORRECT

What unlikely design material did you and Andrew use to design the levels found in *Dizzy*?
It was rolls of wallpaper, and I've still got them all. It was the cheapest large surface area. Specifically, and this isn't known, it was *Star Wars* wallpaper, which I had up in my room. I'd absolutely begged and begged my parents for that wallpaper.
CORRECT

The game included several references to the poem *The Green Eye of the Yellow God*. Can you recite the opening line to that well known poem?
Oh no. There's a green… In the land of the… Something about a Kumquat tree… Something there lived with a green eye or something. Something like that.
INCORRECT:
(*There's a one-eyed yellow idol to the north of Kathmandu*)

What was the effect of birdseed when used in *Dizzy*?
It wasn't good for birds. It poisoned them. We were big fans of Roadrunner cartoons, and Wile E. Coyote always used poisoned birdseed against him.
CORRECT

What was the game's original RRP?
Easy. £1.99.
CORRECT

LEADERBOARD

1. Phillip Oliver	**(5/6)**
1. Charles Cecil	**(5/6)**
1. Sean Murray	**(5/6)**
1. Paul Gower	**(5/6)**
7. Martin Hollis	**(4/6)**
7. Miles Jacobson	**(4/6)**
7. Tony Hawk	**(4/6)**

After uncovering old dusty archives in his attic to prove he had answered a question correctly, Philip Oliver takes joint first place.

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develop
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THE FAQ PAGE: JOHN ROMERO

Develop grills respected figures from the global games industry

Loot Drop CEO and co-founder John Romero is puzzled by what he sees as a short-sightedness by the traditonal industry to recognise the potential of the social space

Who are you and what do you do?
My name is John Romero, and I am CEO, co-founder and CCO of Loot Drop. What kind of jobs do I do? A lot of things. Programming, game design, audio direction, and art direction. I also handle a lot of the business tasks that come with being an independent game studio.

What are you working on right now?
I'm overseeing two social games and doing some level design on *Ghost Recon: Commander*.

What was the first video game or product that you ever worked on in the industry?
I worked on a lot of games before getting in the industry, but when I finally did get into the industry at Origin Systems my first job was to port *2400 A.D.* from Apple to Commodore.

What was the first video game you ever played, and did you enjoy it?
The first video game I ever played was *Pong* on a Sears system. I thought it was okay, but it wasn't as exciting as the pinball machines I was playing.

What is your favourite game ever, and for what reason?
My favorite game ever is *World of Warcraft*, because it is all games. I played that game every day – literally – for five years. I have five level 80s and several 60s and 70s. One of the most interesting things for me was the technology behind the world – the entire world was streaming seamlessly as you travelled with no loading screens. The load-balancing server tech is the best in the industry, and the client software is the best piece of engineering I have ever seen.

> ***"The first video game I ever played was Pong on a Sears system. I thought it was okay, but it wasn't as exciting as the pinball machines I was playing."***

How many hours a week do you spend playing video games?
When I am not trying to ship a game, I play games on the weekends, probably for between five and ten hours a day. Otherwise, it's probably a couple of hours a day.

What area of the industry do you think needs more 'investment'?
I think companies, especially big companies, need to invest more effort in attaining stability and not have to lay people off all the time. Plan your development cycles more efficiently and be more fluid in resource allocation.

What do you enjoy about the video games industry today?
I love that as technology changes and improves, games start following suit. Sometimes, this ends up with really interesting opportunities for design, and that makes it an exciting place to create in.

What disappoints you about the video games industry today?
I don't know that I'd say it's disappointing, but I find the traditional games industry's lack of awareness of games in the social space puzzling. Sometimes, I'll see a post on a forum asking 'has Romero done anything lately?'. *Ravenwood Fair*, one of my most recent social games, was a big success, financially and critically. It was even nominated for multiple awards. There are a lot of vets in this space who have had similar success, but it's largely unnoticed by the traditional games industry.

Which has been your favourite game to work on?
My favourite game to work on was probably *Hyperspace Delivery Boy*. It was great, working closely everyday with just me and Tom Hall. It's always a blast working with Tom, and we are always laughing and joking and having fun the entire time while we're making games.

What game that you were not involved with would you most liked to have worked on?
I wish I could've been part of the 'dream team' that made *Chrono Trigger*.

What other video games developer do you most admire?
The developer I most admire is Tim Schafer, because he makes whatever game he wants to make and they all turn out great. To me, Tim is the embodiment of my motto 'design is law' because Tim doesn't make his games around technology, and he doesn't compromise design because of technology. He makes the games he wants to make, and that is why he is here.

What hobbies, collections or interests do you have that are completely unrelated to video games?
I'm a huge Disney fan. Brenda and I go almost every month. I also love cooking Mexican food.

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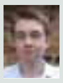
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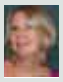
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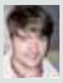
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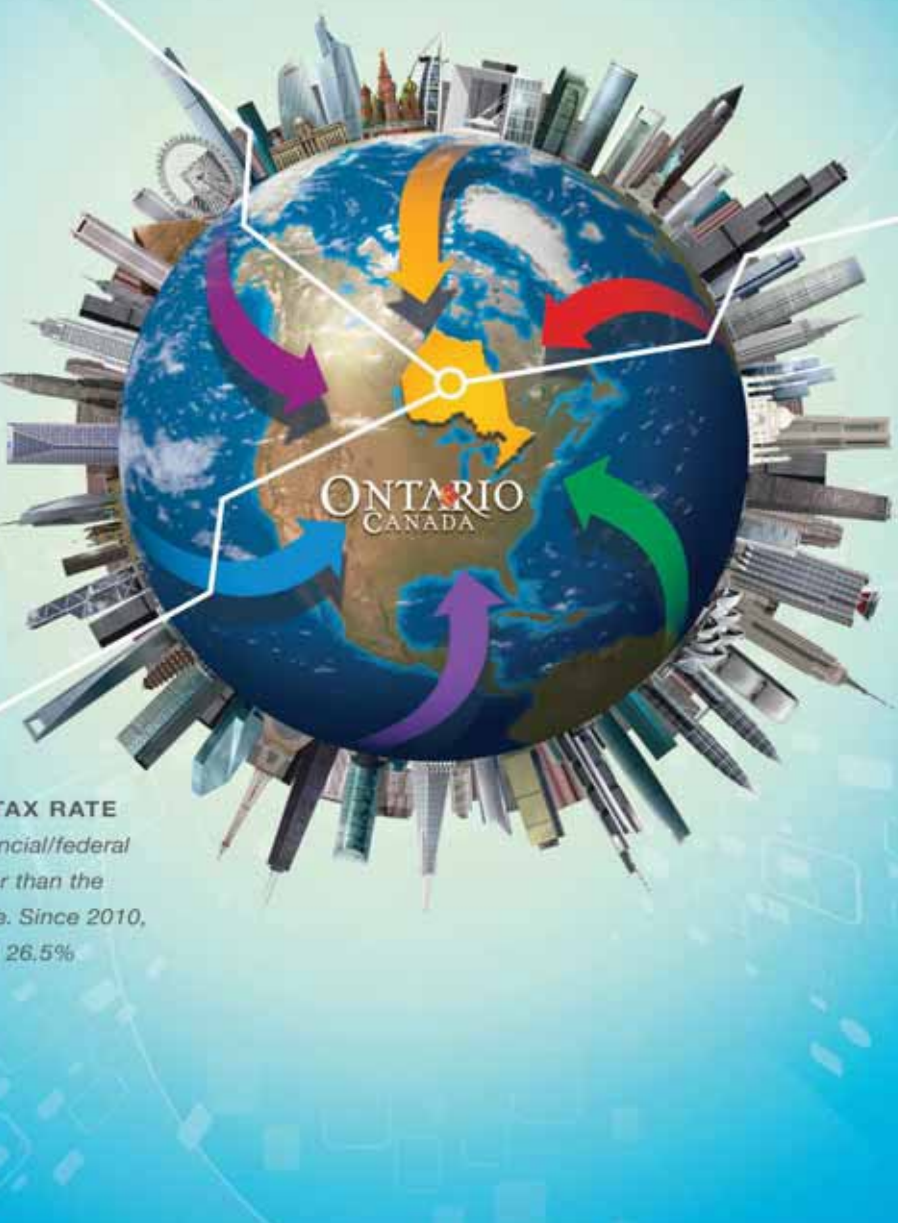

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